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EDITED BY

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

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Original Communications.

CLINICAL NOTES

ON THE

ELECTRIC CAUTERY IN UTERINE SURGERY.

BY J. BYRNE, M.D.,

SURGEON-IN-CHIEF TO ST. MARY'S HOSPITAL FOR DISEASES OF WOMEN; CLINICAL PROFESSOR OF UTERINE SURGERY TO LONG ISLAND MEDICAL COLLEGE, ETC.

CASE XVI.

LARGE FIBRO-CELLULAR POLYPUS OF THE CERVIX; FIRST NOTICED FIVE DAYS AFTER PARTURITION.

Mrs. M——, aged 28, was delivered of her third child April 6th, 1870. During gestation nothing occurred to excite her suspicions, and her general condition was in no way different from that observed in two previous pregnancies. In this third labor, which lasted but a few hours, she was attended by a midwife, and no difficulty occurred further than that the after-birth was slow to come away. Yet she was sure no undue traction had been made on the cord.

Three or four hours after delivery she was seized with very severe expulsive after-pains, which lasted for three days, then subsided, and her condition for the following two days was, on the whole, comfortable.

On the fifth day, being without a nurse, and having no one to care for her children, she ventured to get up and walk about; but no sooner had she done so than a large substance, which she thought was her womb, protruded from the vagina. She immediately returned to bed, and so remained until I was requested to see her, which was on the 14th (eight days after confinement). During these three days there was a constant passive hemorrhage, and she appeared very weak and anæmic; but she complained of no pain, and the greater part of the tumor had retreated within the pelvic cavity soon after assuming the recumbent position. In shape it was ovoid, or rather pyriform, about the size of a uterus at from three to four months' gestation, and of firm consistence, except at its lower surface, where it yielded readily to pressure from below upward, but immediately recovered its convexity on the pressure being removed, thus giving a very distinct impression of its being hollow. Several abraded spots were observed on its sides and inferior surface, from which blood oozed, and the whole was of a deep flesh color.

In accordance with my advice, she was brought to St. Mary's Hospital April 16th, 1870, when a careful examination was made with the hope of deciding as to whether this was really a case of inversion of the uterus or a polypus. On introducing two fingers within the vagina and making traction on the prolapsed mass with the other hand, it was found that there was no cervical rim, but, on the contrary, the vaginal surfaces and that of the tumor were continuous, except at one small spot

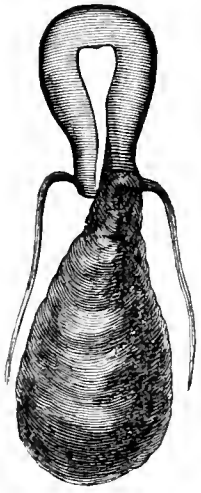

Fig. 15.

anteriorly, which was depressed. Here an effort was made to introduce a probe or sound, but unavailing. By examination per rectum and pressure above the pubes, I failed to satisfy myself of the presence of a uterus above, and for the time being desisted from further efforts at diagnosis. At this juncture, the case being one of unusual interest, I requested Drs. Thomas, Noeggerath, and James L. Brown to see her with me. The same steps towards forming a diagnosis were again resorted to, and after repeated efforts Dr. Thomas managed to get a probe into the cavity of the uterus from the bottom of the little concavity in front, and thus all doubts as to the position of that organ and the character of the tumor were at an end. It is but proper to state, however, that before the cavity of the uterus was reached all present felt certain of having detected, by bi-manual examination, a body which it did not seem possible could be any other than the uterus. Nevertheless, had every attempt to reach the cavity of the uterus failed, and no other evidence of its existence above been found than that afforded by the rectal and supra-pubic touch, the true nature of the case must still have remained doubtful; because, supposing this to have been a case of inversion, it is very easy to imagine how a subperitoneal fibroid might have swung into the position vacated by the inverted uterus, and thus deceive the very best diagnostician.

Again, though, as Dr. Thomas observes,* the presence of a body in the uterine region may warrant

NOTE.—Owing to a mistake on the part of the printer, a foot-note at page 557, which reads: "Two operations were resorted to in this case within the last month," &c., has been misplaced, and refers to case No. XI. on the next page.

Also, by a typographical error, the whole number of cases treated is put down in one place as 73 and again 70, whereas in each instance it ought to read 72.—J. B

* Diseases of Women, 3d edition, p. 412.

a more or less forcible introduction of a probe when, owing to the agglutination of tissues by inflammatory action, the aperture may have become closed, it should not be forgotten that under such circumstances but a small amount of force would be needed to effect a passage into cellular tissue or elsewhere in this immediate neighborhood.

At all events, this case, if not unique, is so interesting and instructive that no apology is needed for occupying so much space with its history.

THE OPERATION for the removal of this polypus was also no less profitable than interesting, because, in addition to errors committed in operating, and, of course, carefully avoided ever after, all my subsequent experiments towards devising a more powerful and yet portable battery than had been generally used heretofore, were prompted by what was observed on this occasion. In the first place, though the battery employed was one of huge dimensions, the thickness of the wire which it was capable of heating was quite insufficient to thoroughly cauterize the tissues in its passage through the pedicle; secondly, I contracted the loop too rapidly; and lastly, to make the matter still worse, traction was made on the tumor, so that, like ripping a seam in cloth, while some of the fibres were cut, many were barely touched with the heated wire.

The consequence of all this was, that my patient narrowly escaped death from hemorrhage. One large artery had to be ligated, and the vagina was tamponed with oakum soaked in persulphate of iron.

On account of this latter objectionable application, of which I can conceive nothing more filthy and abominable under all circumstances as a uterine or vaginal styptic, the cut surface was slow to heal, yet the patient was discharged well within a month from the date of her admission.

She has since given birth to her fourth child, and is in the enjoyment of perfect health at present.

This case is suggestive of many pathological theories and speculations; but the limits of this paper will not permit me to say more than that I believe the formation of this polypus commenced in the cervical canal before or soon after conception; that its growth took an upward direction; and, as the development of the uterus was proportionately greater and more rapid than that of the tumor, there was thus ample room afforded for its safe accommodation during gestation.

CASE XVII.

AMPUTATION OF CERVIX UTERI FOR HYPERTROPHY AND PROCIDENTA, RESULTING IN PERMANENT ELEVATION OF THE UTERUS.

Mrs. ——, aged 35, has had five children, the youngest 3½ years, and one miscarriage about three years previous to my seeing her, which was on December 16th, 1870. Complained of severe and constant backache, bearing-down pains, leucorrhœa and vesical tenesmus. Menstruation regular, though somewhat painful, and occasionally in the intervals more or less muco-sanguineous discharge, especially after long standing or fatiguing exercise. On examination per vaginam, the uterus was found low down, immediately within the vulvar outlet, and the cervix much enlarged, irregular in form, and tender. Os tincæ sufficiently open to admit the point of finger, but not further dilatable on account of the swollen condition of surrounding tissues.

The vesical wall was dragged down to such a degree as to constitute cystocele when the patient stood erect. The finger, on being withdrawn, was covered with a sanious mucus. The speculum being now introduced, the appearance of the organ was such as might be expected, the cervix fully two and one-half inches in diameter, purplish-red, and lobulated. The sound passed to the extent of four inches, and in such a direction as to show some degree of anteversion with slight flexion; but by conjoined manipulation it was evident that the great depth of the uterus was due to the increased size of its cervix, and that there was little or no corporal hypertrophy.

After a few months' treatment, consisting principally of warm vaginal douches, iodo-glycerine to cervix, a Hodge's pessary, etc., the uterus improved greatly, and she stopped visiting the out-door department of the hospital for some time.

Jan. 4, 1872, she applied again for advice, and stated that her former improvement did not continue long.

Her general physical condition was now much changed for the worse, and she had had several attacks of protracted menorrhagia since last seen. The depth of the uterus was four inches, and, except that the most gentle introduction of the sound caused hemorrhage from the cervical membrane, the parts presented an appearance very similar to that first observed.

She was advised to come into hospital for operation, and did so on Feb. 2, 1872, when it was decided to remove the whole cervix close to its vaginal insertion, by galvano-cautery, and subsequently, when the parts would heal, to take away portions of the anterior vaginal wall by Dr. J. C. Nott's clamp-eraseur.

Operation.—By means of the small cautery-knife (G) a circular fissure was made around the base of the cervix so as to form a bed for the wire-loop. The latter was next adjusted and the part to be removed securely embraced, while *slight* traction was made by means of vulsellum. (See Fig. 10.)

The battery connection being now effected, the loop was *slowly* contracted, so as to occupy not less than eight or ten minutes in passing through, thereby avoiding hemorrhage. When the cervix was lifted out the stump was found to be deeply concave; and as there was no appearance of blood, neither tampon nor other dressing was applied.

During the three days subsequent to the operation, no special treatment was needed, as the patient felt no inconvenience whatever from what had been done.

About the fourth day—which I find is the rule in such cases—a copious discharge of healthy pus began to flow, and during the ensuing week the vagina was douched twice a day with tepid water and castile soap, and at a later period with a solution of sulphate of zinc and water (℥ i. to Oi.). An examination made on the 2d of March (four weeks after operation) showed the parts to be entirely healed, and the surface from which the cervix had been removed, *smooth* and covered with healthy membrane.

March 9th.—The patient was placed on the table, and anæsthetized previous to operating on the anterior wall, as above stated, my friend Dr. Nott and the members of the hospital staff being present, when, to the surprise of all, the following condition of things was observed: *There was no bulging of the vesico-vaginal septum, and the uterus was with difficulty reached by the finger, as if the vaginal canal had been stretched in an upward direction. The uterus was not alone elevated, but no reasonable amount of traction, by means of a vulsellum, could move it from its lofty position.* No further operations being indicated, she was soon after discharged cured.

This remarkable degree of fixation of the uterus, fol-

lowing amputation of its cervix by the electric cautery, is a clinical fact worth bearing in mind, especially as neither fever, pelvic or abdominal pain, nor, in fact, any other symptom indicative of inflammatory action, followed the operation. However, there cannot, I think, be a doubt but that it was due to some local inflammation of a subacute form in the areolar tissue and lymphatics of the broad ligaments, resulting in a tightening or abnormal inelasticity of the uterine supports.*

CASE XVIII.

INTRA-PELVIC FIBROID.—THIRD OPERATION ON SAME PATIENT.

The young lady whose case has already been fully given (Case XIII), having entirely recovered from the severe ordeal undergone in August last, and having suffered much of late from vesical tenesmus, occasional retention of urine, and other distressing effects of pelvic impaction, was induced to submit to a third operation on first of the present month (December). This consisted in the removal of all that part of the tumor within the lower pelvis, the presence of which was the cause of all the suffering now complained of. A large-sized hard rubber crochet-needle, rounded at the end, was heated and slightly bent so as to accommodate itself to the curve of the sacrum and posterior contour of the tumor.

A small hole was drilled transversely near its distal extremity, and at right angles with the direction of its curve, and through which a stout platina wire was passed half its length. The free ends of the wire were now passed through two copper tubes, each $\frac{1}{16}$ of an inch in diameter, and eight inches long, and bent to nearly the same form as the rubber rod (Fig. 16).

An anæsthetic having been administered, and the patient placed on her left side, the two tubes with the rubber rod between were carried behind the tumor and as far up as deemed safe.* The rubber support being now entrusted to an assistant, and maintained steadily in position, one of the copper tubes was carried around half the circumference of the tumor, the wire being pushed up, piece by piece, from below, and when the centre anteriorly had been reached, was so held until the opposite half had been encircled in like manner. Two small pieces of wood, each one inch

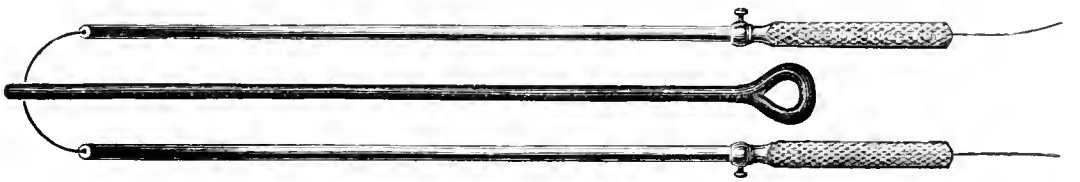

Fig. 16

and a half in length, flat-oval, and having two holes running through longitudinally for the reception of the and the excision of which at an earlier period did not seem warrantable on account of her weak condition.

The part now referred to may therefore be considered as the stump from which the large mass was taken on the former occasion. It does not seem to have increased in size during the last three months, though its presence has become more and more painfully felt of late. The upper two-thirds of the pelvic cavity was tightly packed, but the inferior portion towards the vaginal outlet was less crowded, principally on account of the globular form of the stump. The latter was perfectly smooth, and presented no appearance of having ever been an open granulating surface or being covered with cicatricial tissue.

In reflecting over the measures suggested to my mind for accomplishing its removal, either of two methods appeared practicable,—to repeat the operation first resorted to, by splitting the mass into two parts, and then looping either half; or to attempt its removal in one piece by a loop thrown around the whole circumference of the tumor.

On account of the great length of time occupied, however, not to speak of the almost insurmountable trouble and difficulties experienced on a former occasion, the first of these plans offered but little attraction; and though it seemed at first impossible to devise any means by which a smooth globular mass might be embraced by a wire noose, I decided to make the effort.

The method practised may be described as follows: copper conductors, were one after the other slipped up so as to unite, yet insulate the latter.

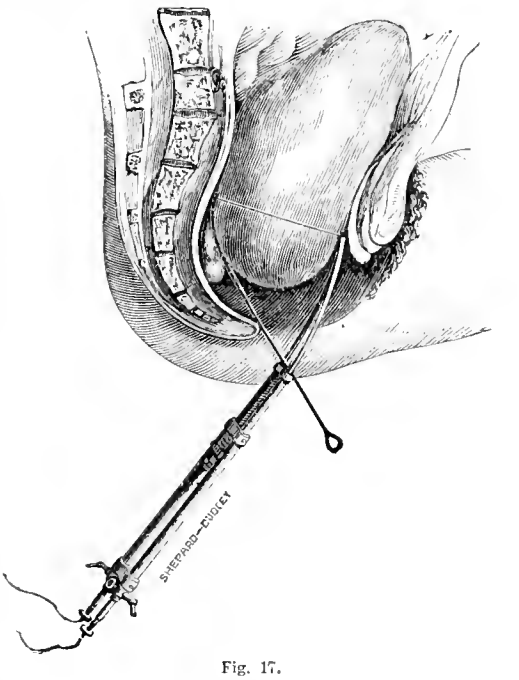

Fig. 17.

* In procidentia, where amputation of the cervix is called for, would not the introduction of a cylinder speculum after operation, and its retention for eight or ten days, insure a permanent elevation of the uterus, and provide against relapse of other parts?

* Fearing that some abnormal position of the Douglas *cul-de-sac* might exist, the part selected for looping was some distance below the fornix vaginæ.

This being accomplished, the free ends of the platina wire were next passed through a modification of the loop instrument as shown in Fig. 2, and the copper conductors firmly fastened in the socket. All being now in readiness, the battery connections were made, when the heated wire cut through the rubber support and embedded itself in the substance of the tumor.*

The rubber rod was now withdrawn, and the loop *very slowly* contracted, the time occupied in cutting through the whole mass being fully thirty minutes, exclusive of necessary interruptions. There was no hemorrhage from the stump, but the vagina was tamponed as a precautionary measure.

Reaction after the operation was, in this instance also, quite satisfactory; and though her pulse for several days did not get below 110, she expressed herself as feeling very comfortable and free from abdominal pain or tenderness. The vaginal dressings were removed on the third day, and the parts well bathed with tepid soap and water; to which was added carbolic acid. Copious discharges of healthy pus now appeared, the vagina was douched several times a day, she enjoyed and retained her nourishment and stimulants, and everything progressed favorably up to the night of the 10th, nine and a half days after the operation. On that night the weather suddenly became intensely cold, and being nervously apprehensive that urine might accumulate in the bladder so as to require the use of a catheter, she persisted in getting out of bed a number of times to pass water.

At an early hour of the morning of the 11th, Dr. Schapps saw her, was told she had several chills, and recognized well-marked symptoms of incipient tetanus. This condition of things rapidly became worse, and though every means at our command was promptly applied and persevered in, no amelioration of her spasms was effected thereby, and she died at four A.M. on the 14th.

Autopsy.—An incision was made from the ensiform cartilage to the symphysis pubis, and the integuments dissected from the latter preparatory to its removal. This being effected, a careful inspection of the abdominal and pelvic contents *in situ* was thus afforded. There was almost a total absence of adhesions, or any evidence of recent or remote peritoneal inflammation. The ovaries were small and shrivelled, but healthy, and the tubes, with their peritoneal attachments, were free and in other respects normal.

The utero-ovarian plexus of veins on right side was in a varicose condition, and one fully as large as the jugular issued from the outer circumference of this varix, and passed directly upward to a point opposite the gall-bladder, where it entered the ascending cava. The fundus uteri was cup-shaped, as if partially inverted; the bladder was healthy; and the peritoneal surfaces all over remarkably pale and free from lymph deposits. The anterior vaginal wall, of which the uterus seemed to be a continuation, was next slit up to within an inch and a half of the fundus, when the partial inversion referred to became still more manifest, and was exactly central, each tubal opening being the lateral boundary of the depressed part.

*The tumor was now found to be not interstitial, but connected to the uterus by two separate attachments: one, the pedicle proper, springing from the right wall below the Fallopian opening, in diameter about two inches, and short; the other covering a great portion of the opposite side, and extending down the cervix to its junction with the vagina.**

This latter connection was evidently secondary, and the result of inflammatory action at some remote period. The vaginal surface of the tumor, from which a part had been excised, was covered with healthy granulations and the healing process remarkably far advanced considering the short time that had elapsed since the operation. The post-mortem tumor was not weighed, but appears to be not quite twice the size of that removed by the last operation.

(To be continued.)

* On account of the length of wire required to encircle the tumor, two batteries were connected and used until a part of the mass was cut through, after which one was found sufficient.

* This adhesion of the tumor to the left side of the uterus, undoubtedly resulted from the first attempt made at enucleation in September, 1869.

ADVANTAGES OF THE VERTEBRATED CATHETER IN PROSTATIC RETENTION.

By T. H. SQUIRE, M.D.,

ELMIRA, N. Y.

In his late and very valuable work, "The Principles and Practice of Surgery," Prof. Hamilton, speaking of my new prostatic catheter, says: "I have employed this instrument in a few cases, and have found it to answer its purpose exceedingly well; but, notwithstanding the assurances given by the inventor, it is impossible to divest one's self of an apprehension that the links may become detached and remain in the bladder; nor is it plain what advantage this instrument can possess over the ordinary flexible catheter, when the shaft has been rendered firm and the vesical extremity more flexible, in the manner which has been already described." The description referred to reads thus: "There is also a very simple expedient to which I have resorted in these, and in many other cases, with remarkable success. Having dipped the end of the gum-elastic catheter in hot water to render it more flexible, it has been introduced to the obstacle, and the stylet then withdrawn an inch and a half or two inches. By this manœuvre the end of the catheter is still more elevated, while it is so flexible as to assume any direction which the channel may happen to require. The outer end of the catheter is now seized and pushed down on the stylet, while, almost at the same moment the stylet itself is gradually withdrawn. Care must be taken, in adopting this method, that the stylet is withdrawn in the first place so far as to render it certain that the extremity cannot protrude from the eye of the catheter."

I trust I shall now be able to show what advantages the vertebrated catheter possesses over the ordinary flexible catheter, when employed in the manner here described. In the first place, the care required to have the stylet so far retracted as to render it certain that the extremity cannot protrude from the eye of the catheter, and the care and skill required in gradually withdrawing the stylet itself almost at the same moment that the catheter is pushed down on the stylet, are entirely dispensed with when the vertebrated catheter is employed; and when the result of an operation depends upon the exercise of care and skill, it is not so likely to be successful as when the result does not depend upon elements so apt to be deficient in a large proportion of operators.

As to the special directions which the distinguished author here gives in respect to the management of the ordinary flexible catheter, we may very properly de-

vote to them a close and careful consideration. He says: "By withdrawing the stylet an inch and a half or two inches, the end of the catheter is still more elevated, while it is so flexible as to assume any direction which the channel may happen to require." The first part of this statement is true. That is to say, when a styletted gum-elastic catheter has become arrested at the prostatic portion of the urethra, if the stylet be retracted in the direction of its shaft for a distance of one inch and a half, the beak of the catheter, if it were allowed by the anatomy of the patient to obey the effect of this retraction, would be elevated a distance of nearly three inches, passing in a straight line to a point external to the body, about one inch above and in front of the pubic arch. But, owing to the anatomy of the patient, the beak, under these circumstances, can only be elevated from the posterior to the anterior wall of the canal, and this, of course, is all the elevation required. To effect such an elevation of the beak, the stylet only requires to be retracted about one-fourth of an inch. When the beak is thus elevated, the catheter may be advanced till the beak again strikes the posterior wall. Another retraction of the stylet, about one-fourth of an inch, will bring the beak a second time in contact with the anterior wall of the urethra, and then a second advance of the catheter may be made; and this double process of retracting the stylet and advancing the catheter, will, by quarter-inch stages, generally conduct the beak into the bladder. These separate acts of retracting the stylet, and of advancing the catheter, may be performed alternately, or, if the operator be very skilful, they may be accomplished simultaneously, and by a continuous movement of the stylet backward and the catheter forward. I have myself, from experience in years past, learned the value of this manœuvre. It answers well in skilful hands, when the obstruction is at the posterior wall of the urethra; but it is of less service, or of no service at all, when the obstruction is differently situated, as it sometimes may be.

The other part of the statement, "while it is so flexible as to assume any direction which the channel may happen to require," must be taken with some limitation. Dipping the end of a gum-elastic catheter in hot water—temperature, say, of 150° or 175° Fahr.—does render it more flexible than it would be at the common temperature of our apartments; but if we confine our attention to the vesical one inch, or one-half inch of the catheter, we do not, even at the moment of withdrawing it from the hot water, find it "so flexible as to assume any direction which the channel may happen to require."

Although the deeper part of the urethra is virtually a rigid canal, yet it is lined by a soft and very delicate membrane which will bear but very little pressure without injury. An instrument that can of itself follow the curves of this portion of the urethra, without inflicting injury upon its lining membrane, must have a lateral instability—flexibility—which is delicate in the extreme. Such flexibility the gum-elastic catheter does not possess, even at the temperature of 170 degrees. But, even if such were the case, however expeditious the operator may be, the catheter, thus previously dipped in hot water, is sure to become of the same temperature as the body before the time arrives for retracting the stylet. All arguments, therefore, in favor of the gum-elastic catheter must be based upon the degree of flexibility which it possesses at the temperature of the human body; and at this temperature, if we confine our attention to only one inch in the length of the tube, it may with more propriety be called a *rigid* than a flexible catheter.

Moreover, if the gum-elastic catheter did possess, at the time of use, the degree of flexibility required by the exigencies of the case, this very circumstance would deprive it of that *longitudinal stability* which is a very important requisite in a prostatic catheter. In such a condition the gum-elastic tube might double on itself in the canal, and there would be nothing to prevent its walls coming in contact with each other, and thus obliterating the calibre of the instrument.

Another objection which might be named is the impossibility of giving to the gum-elastic catheter so hard, smooth, and acceptable an external surface as can be secured by the use of silver as the material for making the instrument. The difference in this regard is quite important in respect to the precise form and finish of the beak. A prostatic catheter should not only have a perfectly smooth external surface, but its beak should be *exactly* hemispherical in form. In these particulars of surface and form, it is very difficult to give a perfect beak to a gum-elastic catheter.

Considering now the attributes of the vertebrated prostatic catheter, we find it possesses—chief of all requisites—in its vesical extremity the most delicate lateral instability. This essential quality does not depend upon the elasticity of the material of which it is made, but it is the resultant of a series of perfect joints. The first joint is only one-fourth of an inch from the beak. It is ball and socket in principle, and, with the least possible degree of friction it allows the beak to turn, in any direction, fifteen degrees from the axis of that part of the instrument with which it is joined. The remaining joints are precisely similar to this. They are eleven in number, and only one-fourth of an inch apart. The delicacy of the flexibility thus obtained is strikingly illustrated by the spontaneous bending of the instrument under its own weight. Of this catheter it can, of truth, be said, "it is so flexible as to assume any direction which the channel may happen to require." With this quality of extreme flexibility, it possesses every other essential requisite for a prostatic catheter. It has a good calibre, smoothness of external surface, hemispherical beak, longitudinal stability, inability to double on itself in the canal. In use, the surgeon has only to oil the instrument and push it gently along the urethra. When it reaches the point where other instruments are so apt to stop, the slightest pressing of the posterior wall of the urethra upon the circular shoulder of the beak causes this to be elevated, the flexion taking place at that joint which is only one-fourth of an inch from the end of the catheter. The surgeon, meantime, exercises no care or skill, save that which is necessary to move the instrument along the canal. The elevation of the beak, which has just taken place, brings the axis of the terminal quarter-inch of the catheter into proper relation with the axis of that part of the canal which is immediately before it, and there is no impediment to advancement. If, further on, there is undue pressure from the posterior wall of the urethra, the beak is again elevated, and again the terminal quarter-inch of the catheter is in conformity with the direction of that part of the canal which is immediately in its front; and thus it is that the simple pressure of the urethral wall upon the shoulder of the beak causes the end of the catheter always to be properly directed on its course. The same influence which causes the beak to obey all the curves of the urethra, causes each succeeding section of the instrument to follow in the wake of its antecedent; and in this simple, easy, expeditious manner, almost before the surgeon or the patient is aware of it, the bladder is entered and the desired relief obtained. And this is the result *in every case*

where the urethra is not actually strictured or blockaded by a virtual right angle. This statement would seem presumptuous if statistics, in over fifty cases of prostatic retention, did not warrant the assertion. And yet the conclusions drawn from theory, when correctly understood, are in strict harmony with the irresistible logic of these facts. Is it a thing inconsistent with reason that a hollow instrument can be made, every time, to go through a canal eight inches long, open at both ends, and not strictured in the middle? No surgeon doubts the possibility of passing a rigid silver catheter from the meatus externus to the membranous portion of the urethra, *in every case* where the canal is free from stricture. This feat is always easy of accomplishment, because the *urethra*, thus far, "is so flexible as to assume any direction which the *catheter* may happen to require." Now the counterpart to this law of physics furnishes the proof, in theory, that the vertebrated instrument will traverse the remainder of the urethra in every case where neither stricture nor right angle exists; for here the *catheter* "is so flexible as to assume any direction which the *urethra* may happen to require." And right here, by way of parenthesis, I cannot refrain from inserting a few simple axioms, in physics and in motion, which are of fundamental importance in respect to the subject of catheterism, but which, probably on account of their very simplicity, have never been systematically expressed in any standard work on surgery. They are as follows:

1. A rigid canal that is straight, may be easily traversed by a rigid instrument that is straight.

2. A rigid canal that is straight, cannot be traversed by any rigid instrument that is not straight.

3. A rigid canal that conforms to the arc of a circle, may be easily traversed by a rigid instrument that conforms to an arc of the same circle.

4. A rigid canal that conforms to the arc of a circle, cannot be traversed by any rigid instrument that does not conform to an arc of the same circle.

5. Any rigid instrument may easily traverse a perfectly flexible canal.

6. Any rigid canal may be easily traversed by a perfectly flexible instrument.

7. A perfectly flexible canal may be easily traversed by a perfectly flexible instrument.*

It seems to me that the foregoing considerations are conclusive, and that they ought to convince any one of the decided advantages of the vertebrated prostatic catheter. It may not be possible by mere theorizing to induce absolute conviction; but facts are invincible, and statistics have shown this catheter successful in the highest degree, in very many cases where all other catheters had signally failed.†

But Professor Hamilton says: "It is impossible to divest one's self of an apprehension that the links may become detached and remain in the bladder." And it must be confessed there is considerable ground for this apprehension, nevertheless, if the instruments are manufactured in the most perfect manner, and if due care is exercised in their use, an accident of this kind ought very seldom if ever to occur. As the catheter is now made, any person can take it apart for inspection, and put it together again in less than one minute of time; it must therefore be distinctly understood, that in case such an accident ever should take place it will be the fault, not of the instrument, but of the person using it. Furthermore, if the future should prove this instrument more liable to the accident named than other instruments are—for it must not be forgotten that fragments of other catheters have not unfrequently been left in the urinary bladder—the misfortune may very properly be set over against perforation of the urethra, and unrelieved retention, so frequently chargeable to the rigid instruments. The common silver catheter and even the gum-elastic with its stylet, have perforated the urethra much more frequently than the profession have been willing to admit. Professor Hamilton himself believes the common silver catheter manages to "tunnel" the urethra in about half the cases where it is used by druggists and empirics. Judging from my own observation and other reliable sources of information, I am satisfied that, even in the hands of inexperienced professional men, this accident occurs in a large proportion of the cases of prostatic retention. Nor has the peritoneal cavity always escaped the migratory excursions of the rigid catheter.*

These serious evils attending the use of rigid catheters could be more easily overlooked if, in connection with them, the relief sought could always be realized; but, unfortunately, the rigid instrument too often succeeds to do the evil, and at the same time fails to do the good. And this double misfortune, let it be borne in mind, is generally the fault, not of the operator, but of the instrument. It is to the credit of the vertebrated catheter, that the only accident that can result from its use must happen while its beak is in the bladder.

In cases of prostatic retention, let the physician using the new catheter be always sure that the flexibility of the vesical portion is perfect, that the links of the chain are safe, that the instrument is neither too large nor too small, and that the urethra is free from stricture, and then he will very seldom, if ever, fail in drawing the water.

* Of course it is to be understood, in each case, the instrument must in diameter correspond with the diameter of the canal.

† See *American Journal of the Medical Sciences* for October, 1871, and October, 1872.

BORAX AND THE NITRATE OF POTASS.

IN THE LOSS OF VOICE FROM "COLDS" IN PUBLIC SPEAKERS AND SINGERS.

By JOHN W. CORSON, M.D.,

ORANGE, N. J.

Some years since, while in charge of the class of "Diseases of the Chest and Throat," in connection with the New York Dispensary, at the suggestion of a non-professional friend engaged in teaching elocution, we were led to test the efficacy of borax, or the biborate of soda, in many cases of sudden hoarseness from cold. In mild attacks it often acted like magic. About ten minutes before any continuous effort at speaking or singing, a lump of borax the size of a garden-pea, or about three or four grains, was held in the mouth till it was slowly dissolved and partially swallowed—distilling, as it were, down the throat. For an hour or so it would frequently render the voice quite silvery and clear. For this purpose, we discovered that it possessed three special advantages. It was easily obtained, convenient to carry in the vest pocket, and perfectly harmless. Gradually, in private practice, we afterwards found that it was very serviceable to clergymen and singers who were subject to distressing interruptions from the above cause, on important occasions.

Borax thus slowly melted in the mouth till it distils down the throat, as any one in health may safely

* Complete notes of one such case, with post-mortem proof, are in my possession, and in this case the fatal injury was inflicted by a physician of ordinary education.

prove, stimulates the secretion of saliva and makes the whole mouth and throat "water" profusely. Physiologists tell us that the glottis, the organ of the voice, is both a stringed and wind instrument; and the action of borax in moistening its orifice and musical "strings" seems precisely like the "wetting" which restores the missing notes to a flute when it is too dry.

Let us not, in our interest in a "new remedy," for a single troublesome symptom claim too much. Many medicines, as we know, of much value are constantly abused by being misapplied. Neither in chronic affections of the throat, nor in acute inflammation or "tonsillitis," once established, have we found either borax or another remedy, which we shall presently mention, of any special efficacy as curatives. These cases require other appropriate treatment.

Returning again to the subject of a "common cold," we may allude to an agent for which in this special application—just as we were for iodine and ergot in other cases—we are indebted, so far as we know, to "popular tradition." An early friend and patient of ours, since deceased, a New York dock-builder, much exposed to the weather, claimed to have a secret remedy for "colds." But he was too generous to bury anything useful. At length he confessed that it consisted in covering up warmly in bed, drinking a glass of water, and sucking a piece of the nitrate of potass.—or "saltpetre," as he preferred to call it—the size of a garden-pea or a little larger, till it was slowly dissolved and swallowed. We think we improved his prescription by sweetening the water, to cover the mawkish taste of the "saltpetre," mixing them, and swallowing both together. We also increased the dose, from gratifying personal experience, to five grains. As a courtesy from our profession to clergymen and singers, we may suggest that they will find it very convenient in travelling, to carry a few five-grain powders of the nitrate of potass., prepared by the druggists for ready use. Like the borax, it relieves the dryness of the vocal cords. It is also easily obtained in every household, and, taken in the dose recommended, is quite harmless. With the help of the extra clothing and the glass of water, it excites for a whole night a gentle perspiration, and thus, *if taken at the very commencement*, "breaks up the cold." It accomplishes this as do warm foot-baths, with hot teas, or Turkish or Russian baths, if used early, by opening those millions of pores of the skin which Erasmus Wilson counted through his microscope. As the aching, the weariness, and the headache of a severe cold tell us, the blood is slightly poisoned by suppressed perspiration. And the simple lesson of cure is promptly to open these pores. We may add, that the efficacy of any of these remedies is much increased by putting on a warm shawl or great-coat, and throwing the arms about, and walking the floor rapidly till the hands and feet are in a perfect glow, before retiring to bed. If in a hotel, where the sheets may be damp, it is best by all means to have a fire in the bed-room and air them for an hour. We need hardly say that after any treatment of this kind, the patient should prudently wear an extra shawl or great-coat, and avoid standing in the street or exposure to the cold wind next day. Nor is this care in vain. The recent views of Niemeyer and others, as to the frequent inflammatory origin of tubercles in consumptives, have lent a new interest to neglected "colds."

By combining these two modes of treatment, by borax and the nitrate of potass., we have had the pleasure, within the last few years, of restoring to a number of clergymen and lecturers the lost gift of speech within twenty-four hours. Several of these recoveries were so rapid and complete as to be very gratifying. Not long since, a distinguished American lecturer, residing in Newark, was about to telegraph a disappointment the day previous from a severe cold, when he was persuaded to defer his purpose and try these restoratives. Next evening he delighted a large audience with a clear, ringing lecture, full of fine cadences, on the "Yo-Semite Valley."

This treatment has been equally serviceable to singers. We may give two illustrative cases. The lady soprano of a fashionable New York church had been engaged as the chief attraction of a musical entertainment in Orange. The day previous, in a choking, husky voice, she told the committee that she was too ill with a "cold" to sing. We urged her to try the above remedies. She consented. Next evening she rose like a lark in the grand solo from the Messiah, "I know that my Redeemer liveth."

A charming American vocalist, the gifted daughter of a New England physician, who will doubtless be well remembered by all who heard her as the companion of Nilsson at the Academy of Music, happened to be visiting her relatives in Orange. She called us to prescribe for a severe cold, which she feared would oblige her to give up a New York engagement. We directed her to use the nitrate of potass. and borax in order above mentioned. Next evening she sang sweetly as usual. The following week her friends received a slip from a Philadelphia paper, warmly eulogizing her "beautiful voice," and showing that the relief was permanent.

For clearness and convenience, we may sum up the results of our experience in the following brief conclusions:

1. That in sudden hoarseness or loss of voice in public speakers or singers, from "colds," relief for an hour or so, as by magic, may be often obtained by slowly dissolving and partially swallowing a lump of borax the size of a garden-pea, or about three or four grains, held in the mouth for ten minutes before speaking or singing. This produces a profuse secretion of saliva, or "watering" of the mouth and throat. It probably restores the voice or *tone* to the dried vocal cords, just as "wetting" brings back the missing notes to a flute when it is too dry.

2. Such "colds" may be frequently "broken up" at the very commencement; and this restorative action of the borax to the voice may be materially aided by promptly taking, the evening previous to a public effort, dissolved in a glass of sweetened water, a piece of the nitrate of potass. or "saltpetre" a little larger than a garden-pea, or about five grains, on going to bed, and covering with an extra blanket. The patient should keep warm next day. This both moistens the dry throat and further relieves the symptoms of "cold" and slight blood-poisoning from suppressed perspiration, by reopening the millions of pores of the skin more or less closed by cold.

3. These remedies have the three recommendations of being easy to obtain, convenient to carry in travelling, and perfectly harmless.

4. They are nearly or quite useless in the actual cure of long-continued chronic disease of the throat, or acute inflammation or "tonsillitis," both of which require other appropriate treatment.

Russian Alcohol.—Alcohol and brandy are largely manufactured in Russia from mosses and lichens. The quality is said to be exceedingly good.

CASE ILLUSTRATING THE ANTAGONISTIC EFFECTS OF ATROPIA AND MORPHIA, WITH REMARKS.

By FREDERICK D. LENTE, M.D.,

COLD SPRING, N. Y.

Mrs. O——, aged 48 years, in extremely feeble health and much emaciated from the effects of malarious fever of three months' duration, which had obstinately resisted the treatment of several physicians of good standing, applied to me October 14th, 1872. In connection with other treatment for the relief of obstinate vomiting, pains, and other troublesome symptoms, I injected four grains of *quinine* into the arm to break up the *tertian*. She visited me again on the 21st, stating that her vomiting had been arrested, that her other symptoms were somewhat better, and that her fever had been checked until the 19th, when she had a moderate attack. She was, however, very feeble, had eaten almost nothing at breakfast (it was now one o'clock P.M.), and her fever had evidently set in, as her temperature was 102 and skin rather warm; she felt faint and weary with travelling some distance, and then waiting for me several hours. With the view of breaking up the fever as rapidly as possible, and thus enabling her to travel to her home, I proposed to inject hypodermically four and a half grains of *quinine*, contained in fifty-five drops of a fluid, as was done at her previous visit. This was done at twenty minutes past one o'clock. In a few minutes after, she complained of being faint and dizzy, and asked for water. After resting for a few minutes she still complained, and said she felt as if she had taken too much wine. This surprised me, and on investigation I found to my horror that, by some displacement of my bottles of hypodermic fluids, I had used fifty-five drops of Fleming's sol. of atropia, with morphine added to bring it up to the standard of Magendie's sol. of morphia, thus making very nearly *two* grains of morphia and about *one-eleventh* of a grain of atropia. There was nothing to be done but to watch for the effects and endeavor to counteract them. From previous experience, I relied a good deal on the antidotal effects of the two poisons. But the exhausted condition of the patient, and the state of inanition at present existing, caused me to be fearful of a rapid absorption. Half an hour after, the patient walked with but little assistance out of the office, got into a light wagon, was driven one-third of a mile to the house of a friend, talking all the way quite rationally and composedly, and finally got out of the vehicle with but little assistance and walked into the house; at this time she complained of nausea and said she must vomit; but she did not, and the nausea did not recur. Pupils almost natural, a little dilated, perhaps; pulse good; respiration rather slow. 3.20 P.M., two hours after injection: Lying quietly in bed, eyes closed, but not particularly sleepy, and complaining of nothing but weakness, which she had complained of previous to the dose. Pulse 120, full and regular. Directed half an ounce of whiskey every half hour. Pupils more dilated, and acting rather feebly. 5 P.M., three hours and forty minutes after: Within the last half hour has lapsed into almost complete coma. With the greatest difficulty can be made to swallow a teaspoonful or so of eggnog. Has only had one ounce and a half of the stimulant. Respiration 4½ per minute, intervals irregular, but otherwise natural. Pulse 106, full and regular; skin natural in appearance and temperature. Pupils very slightly dilated and immovable; mouth is dry, and she had complained of this previous to passing into insensibility. Directed cool applications to head, and beef-tea and whiskey, an ounce of each *per rectum*, every half h. 7 o'clock P.M., five hours and forty minutes after: Was seen by Dr. A. A. Smith, late of Bellevue, who was assisting in my practice. Pulse 99, full and regular; respiration 5½, intervals very unequal, but otherwise natural; could be roused, with some difficulty, to comprehend a question. Pupils the same. 8 o'clock, six hours and forty minutes after: Is easily aroused, and says she feels "pretty well," in a very drowsy way. Pulse 90, respiration 8, fuller and more regular; can swallow eggnog without difficulty. Directed stimulants to be given less frequently. 11.15 P.M., nine hours and thirty-five minutes after: Dr. Smith was accosted by patient with "good evening" as he entered the door; she said she felt well, except that her head was heavy and her mouth dry; asked for a glass of water, and said she guessed she would go home in the morning. Respiration 9½ per minute; pupils responded very feebly to strong light.

October 23d, 9 A.M. Patient about in the same state as she was before the operation; pupils natural, and no symptoms referable to either opium or belladonna.

November 5th. In the afternoon of last date patient returned home, feeling no inconvenience whatever from her dose.

November 13th. I learned to-day from an acquaintance of the patient that she has been improving in health since the injection, probably in consequence of the interruption of her intermittent trouble, of which she has not since felt any symptoms.

Remarks.—The almost entire absence in this case of all the striking symptoms almost invariably present in belladonna poisoning, when not counteracted by treatment, is remarkable. The following account of the symptoms is given in a recent work: "Dryness of the throat, constriction of the fauces, difficult deglutition, indistinct vision or double vision, headache, staggering, and confusion of ideas, stammering, etc. The pupils are widely dilated, face suffused, lips livid, and pulse rapid and intermittent, delirium and deep coma." To which others have added "nausea and ineffectual retching, feeble pulse, excessive jactitation, &c.

In the present very unsettled *status* of the important question of the *antagonism of poisons*, I offer the foregoing case as a contribution which may materially aid in its solution so far as it relates to two most valuable drugs. The powerful poisons, all of them so uniformly destructive to man, have such varied effects on the lower animals as to render experiments, which have, of course, to be restricted to them, except through an occasional accident like the above, extremely uncertain. Thus there is scarcely a poisonous dose of arsenic for a dog, or of atropia for a rabbit; while if we reverse the poisons for the two animals both will speedily succumb. Careful experiments have appeared to demonstrate to different observers, that in dogs at least there is no antagonism betwen *morphia* and *atropia*,* while numerous instances have been recorded, showing that in the human subject there is a decided antagonism, though none, I believe, so conclusive as the case now presented. This is not the first instance, though the most striking, of this antidotal influence which has fallen under my personal observation. Some time ago I met with a case where, to combat most intense suffering and very alarming symptoms, three hypodermic injections of a solution of morphia and

* In fact, dogs, although frequently chosen for these experiments, are not at all fit subjects, since they bear enormous doses of morphia as of arsenic without injury.

atropia at short intervals were made, the aggregate amount of the solution being *thirty-five minims*, containing something more than one grain of morphia and one-sixteenth of a grain of atropia. In this case the phenomena, though very similar in some respects to those presented by the first-mentioned case, were very different in others. Thus, up to several minutes after the last (third) dose, no marked relief of the pain was noticed, when *suddenly* the patient lapsed into almost complete coma, which became absolute within half an hour. Nothing was done for this patient except to use injections, *per rectum*, of stimulants and beaf-tea moderately. The pulse was rapid after a time, but not alarmingly weak. It is worth noting, that in this case, as in that of Mrs. O., the comatose symptoms disappeared rather suddenly about six hours after the dose was administered. In this case, as in the other, the pupils were almost normal *in size*, and quite immovable under the stimulus of light. I would also call attention to the fact, as furnishing a hint as to the proper relative doses of the two drugs for the production of antidotal effects, that the dose of the atropia was *relatively* larger in this case than in the other, and its toxical effects also more apparent in the excessive dryness of the mouth and throat, thirst, etc., of which the patient complained after recovering consciousness, also the extreme debility which attended the slightest exertion for two or three hours. Patient also remained in a state of obstinate *insomnia* for twenty-four hours, and slept badly for several nights.

I have ascertained, by numerous trials, that if we use for ordinary hypodermic injections a solution of morphia and atropia of the strength of Magendie's formula for the first, and of Fleming's standard solution for the other, we will have the two drugs as equally balanced as possible; and we may safely inject as much as twenty *minims*, containing two-thirds of a grain of morphia and one-thirtieth of a grain of atropia without producing any of the toxical effects of either, and generally with the avoidance of the nauseating influence of the morphia; supposing, of course, that the amount of the solution injected is graduated to the amount of pain for which the morphia is indicated. If it is desired to give more of the morphia than is contained in twenty minims, it is safer perhaps to make the addition from a solution of morphia alone.

In a case of *stramonium* poisoning in a child to which I was called by Dr. Barker, now of Morristown, we used the hypodermic injection of morphia with prompt success. But it seems that the decided evidence of Stillé,* and the valuable article published by my friend Doctor Chas. Carroll Lee, then resident physician of Pennsylvania Hospital, in the *Am. Jour. of Med. Sciences*, January, 1862, in which he records and alludes to at least seven cases of his own, to thirteen cases cited by other competent observers, to "numerous cases" recorded by a physician of Brighton, England, and says that "others might be presented by the dozen if necessary," ought to set at rest this question. But still it remains, with perhaps a majority of medical men, an open one, and laborious experiments are still carried on in England and in this country on the lower animals, with the hope of arriving at some definite conclusions. One of our latest writers on the prompt treatment of poisoning† says: "Some recommend opium as an antidote; it has been successful in one or two cases." Of course we must expect to meet with an occasional failure, as we do with all remedies and all modes of treatment. Thus, Dr. S. D. Gross, in alluding to a case of fatal poisoning by opium to which he was called in consultation, where atropine among other remedial measures was employed, says that the latter seemed to increase rather than diminish the toxical effect of the opium. And Brown-Séquard believes, or did believe ten years ago, that there is no antagonism between the two drugs. But his opinion appears to have been based mainly on experiments on the lower animals—a most uncertain test. These experiments are, however, far from being valueless. Important scraps of information are being constantly accumulated in this way, the collation of which may at some future day settle many questions now in dispute. For instance, Dr. Fraser, of Edinburgh, has very lately ascertained a very singular fact, that although it requires twenty-one grains of atropine to kill a rabbit of medium weight, so small a quantity as 0.015 grain can neutralize the minimum fatal dose of physostigma; and that 0.1 grain is capable of antagonizing a dose of physostigma equal to three and a half times the minimum fatal dose of that poison.

The importance of this question is not by any means limited to the power which its settlement may afford us of saving life when all other means would be likely to fail, but extends to the treatment of disease in all its phases.

Dr. Fraser, in concluding his very able paper in the *Trans. of the Royal Soc. of Edinburgh*, remarks: "The existence of such an antagonism encourages the hope that the power of directly counteracting disease is far from unattainable; and it supplies a strong incentive to efforts designed to determine the conditions of disease, and the action of remedies, with an exactitude sufficient to show how the remedial action may be applied as a counteracting influence to the diseased conditions." In a hopeless case of cerebral disease in the child of an officer at West Point, to which I was called in consultation with the surgeon of the post not long since, and in which extreme contraction of the pupils was a marked and persistent symptom, though no opiate had been administered, I suggested, as a palliative at least, the use of belladonna in small and frequently-repeated doses. The effect was moderate dilatation of the pupils, with some temporary relief. I had forgotten at the time that Dr. Graves had, long ago, suggested that an agent which could relieve the contracted pupils, sometimes occurring in continued fever attended by coma, might also assist in the cure of the case; and that Dr. Anderson, of Edinburgh, had also advised that the state of the pupils, in certain desperate cases, be taken as a guide for the administration of opium and belladonna respectively. By experiment, as every one knows, it has been shown that the application of belladonna directly to the capillaries causes contraction, while opium largely dilates. And Brown-Séquard has proved that belladonna internally administered also causes contraction. In very obstinate and serious cases, then, especially of cerebral disease, attended by a marked and persistent abnormal size of the pupils, may we not with great propriety administer these powerful drugs which we know will entirely control the symptom, and probably the cause? I will conclude with citing one more case in point, where the poison was an animal one. The case is reported in the *Boston Med. and Surg. Jour.* for Sept. 30, 1869, from which I condense it: "A lad, aged 17, had been bitten by a rattlesnake. He was comatose, pale, and cold; lower limbs paralyzed; pulse 20 and very feeble; pupils largely dilated. At about 4 P.M. I gave pulv. opii. grs. ij.; at 6 repeated dose, pulse 32; at 8 repeated, pulse 50; at 10 repeated, pulse 65, slight perspiration; at 12 gave

* Therapeutics and Materia Medica.
† How on Emergencies, p. 216.

last dose, pulse 80, pupils now contracted to normal size. At about 3 o'clock patient waked up, as from a healthy sleep, and asked for something to eat; allowed him a good-sized meal." The reporter proceeds to remark: "One remarkable feature of the case was, that the opium at no time exerted its characteristic soporific influence.

An important question naturally comes up in connection with the above considerations, and ought to be briefly adverted to. What is to guide us in graduating the dose of these potent agents in those desperate cases where a mistake would precipitate the fatal result, and, at the same time, where timidity or hesitancy would be equally dangerous? In some of the cases of reported failure of the antidote it is very probable that the result was due to its too sparing use. Stillé is very decided and exact in his directions. "The dose can have no limit," he says, "but that of the active resistance of the morbific agent. Until this is neutralized, the remedy is little apt to become of itself aggressive and dangerous." "The condition of the pupil," he further says, "is an infallible index for the administration of opium and the mydriatics, in poisoning by one or the other of them. Until the contracted pupil begins to dilate, or the dilated pupil to contract, no danger from the antidote need be apprehended. Their antagonism is complete." These rules will probably hold good in poisoning by one or the other drug *alone*. But when powerful doses of the drugs combined are given, either accidentally or for the removal of certain conditions of disease, or in these days, when murder has become a science, for felonious purpose and to escape detection, we have the pupil perhaps normal in size from the exact balancing of the poisons, and immovably fixed. And yet for hours the coma may be complete, and the respiration down to 4½ or 3½ per minute, as I have seen in the two cases alluded to in this paper, and in one published by me in the *New York Med. Jour.* some three years ago. Here the danger seems imminent, and yet it is impossible to say which drug has the preponderance in keeping up the symptoms. We must then wait patiently and watchfully, taking the *pulse* as the principal guide, and using perhaps galvanism *moderately*, or artificial respiration, but avoid the perturbating treatment so commonly resorted to, and which so often quenches the spark which we should endeavor gently to fan into flame. In none of my cases, threatening as they appeared at one time, did I find any severe or extraordinary measures necessary.

Cold Spring, Dec. 17, 1872.

Progress of Medical Science.

Anæmic Murmur.—James H. Hutchinson, M.D., Physician to Penn. Hospital (*Phila. Med. Times*, Aug. 1872), in a clinical lecture on "Anæmia," stated that he had not been able to find a wholly satisfactory reason for the distinctness of the anæmic murmur at the base of the heart when the patient was lying down. It has seemed to him probable, however, that it might in some way be connected either with some altered relation of the heart to the great vessels at its base, or else with the restraint which the recumbent position exercises upon the freedom of the respiratory movements.

The Malignant Lympho-sarcoma.—Langhans, of Marburg, has made some valuable investigations, tending to define more closely what have been known variously as the lymph-adenomata, the condition known as anæmia lymphatica, leucæmia, or leucocythemia.

He gives the name of lympho-sarcoma to two forms of morbid appearances formerly grouped under the general name of leucæmia, but which both differ from lucæmia proper, in showing no undue proportion of white corpuscles in the blood. In other respects, excepting only that a fatal issue may be expected earlier, the two forms of lympho-sarcoma are not very different from lucæmia. In all three forms there are metastatic changes, and the liver and spleen are affected. In leucæmia, an increase in the number of white corpuscles of the blood has been shown to be so great that they may form one-sixth, one-half, or even a greater portion of all the blood-corpuscles. A similar increase in the blood-corpuscles in lympho-sarcoma has been suspected but never shown. L. divides these latter affections into two classes, the *hard* and *soft*, and gives the following differential points:—

1st.—In the *hard* form, usually, the lymphatic glands lying most superficially are the first seat of disease.

2d.—The *hard* is distinguished from the *soft* by its tough fibrous consistence, and this is regarded as a prominent characteristic.

3d.—Microscopically, in the *hard* form there is hyperplasia of the spleen-follicles and lymphatic structures generally, with excessive development of the connective tissue reticulum of the glands. When the spleen is affected most of the cells are very similar to the normal lymph-corpuscles. But there is also an admixture of giant cells and dark protoplasmic matter, containing numerous nuclei. The *hard* form has but slight tendency to inflammation and abscess, and is seldom the seat of cheesy degeneration and softening. It is usually not painful to the touch and not the seat of periodic pain. Its firm consistence, the absence of periadenitis, and the symptoms already described separate it from scrofulous swelling of the glands.

In tubercular changes with which this form of sarcoma has been seen to be associated in children the same microscopic elements are observed, but the disposition is different. In the sarcomata the connective tissue prevails, principally at the periphery, while the cells are most numerous at the centre. The converse is the case in tubercular induration, or if the cells are not most numerous at the periphery, they are in the intermediate zone.

Usually the disease commencing in the superficial groups of glands, those of the neck being most frequently elected, passes over, after weeks or months, to the groin or axilla. Later, those glands lying in the course of the great vessels take on the change, but the most constant lesion is of the provertebral lymphatic chain. Later still, when the spleen and the greater portion of the entire lymphatic system has become involved, disturbances in nutrition are shown. There are usually no subjective symptoms associated with the first appearance of the swelling. The prominent symptoms of general infection are a preternatural paleness of the skin, rapidly-increasing emaciation, muscular debility, rapid pulse with normal temperature, palpitation of the heart with systolic murmur at the apex, profuse bleeding at the nose, and dyspnœa. At the last there is usually œdema of the lower extremities and effusion into the serous cavities.

These unfavorable symptoms may increase in intensity, and the fatal issue may be a few months after the first appearance of the tumors, or the patient's life may be prolonged several years.

In no case has a favorable termination been observed. Preparations of iodine and of iron have had a transitory effect in arresting or diminishing the bulk of the

tumors, but relapses here invariably occurred. Repeated extirpation seems to have had no influence in retarding the course of the disease. This form of lympho-sarcoma must accordingly be classed among the most dangerous of new growths.

The name of anæmia lymphatica given by Wilks is rejected by Langhans, for the reasons given, that there is no abnormal increase in the number of the white blood-corpuscles.

The changes really consist in a paucity of blood, which is mostly non-coagulable, and resembles weak claret in fluidity and color.

The heart is usually found to be fatty. This condition, together with the changed character of the blood and the pressure of enlarged glands in the œnis, may account for the œdema.

In a similar way, pressure upon the bronchi and biliary ducts may explain the dyspnœa in part and the icterus.

Thus far the number of recorded cases is so small that statistics are valueless. It seems to affect the young by preference, and has been seen in children under ten years of age. Males have it more frequently than females.

Persons otherwise healthy are more frequently attacked than others of delicate constitution.—*Algemeine Med. Centr-Zeitung.* No. 77, Sept., 1872.

Uterine Inflammation and Defective Involution of the Sexual Organs subsequent to the Change of Life.—Dr. Tilt thinks physicians generally have made a great mistake in supposing that with the menopause would come, in every case, complete immunity from uterine diseases to women whose lives had been tormented by this class of affections; and that they are themselves in great measure responsible, since they have, by carefully dinning the above statement into their patients' ears, prevented many women from seeking advice when, after the menopause, a considerable amount of pelvic heat, pain, and muco-purulent vaginal discharge denote vaginitis and endo-cervicitis. And it is often only after these symptoms become sufficiently acute to completely interfere with the duties of life that they apply for relief.

He has seen but two cases in which severe endo-cervicitis has occurred after the menopause in women who had *never* previou-ly suffered from uterine inflammation, and admits that we are justified in asserting that congestive and inflammatory diseases of the womb are effectually barred in women who have never suffered from them previous to that period.

The physiological atrophy which occurs at this time in healthy uteri does not always take place when the organ has been diseased. The presence of an intramural fibroid, or a polypus in the cavity, or a condition of hypertrophy or fibroid degenerescence of the cervix, may interfere with this physiological atrophy for ten or fifteen years, and during this time the woman is liable to inflammations of the sexual mucous membranes, although to a less extent than menstruation acts as a disturbing element.

When, as in some instances, it occurs, involution does not take place uniformly, and there remains, after the menopause, a remnant of internal metritis while the cervical canal is healthy, the latter may shrink so that the fluids secreted by the diseased membrane lining the cavity are with difficulty expelled, and a considerable degree of uterine tormina is caused. Such cases were described by Dr. Matthews Duncan as "leucorrhœa of old women." Dr. Tilt has seen only five of these during twenty years, and, unlike Dr. Duncan, has never had occasion to resort to puncture in order to evacuate the retained fluid.

The only disease he has found to be at all common after the menopause is a more or less acute endo-cervicitis and vaginitis, sometimes existing together, sometimes singly, the latter being sometimes caused by the discharges from the former or by the extension of ulceration.

The presence of an ulcer on the cervix may give rise to no serious symptoms, but will serve to indicate the presence of a similar morbid state of the cervical canal which requires treatment.

These affections are less acute and painful than when they occur prior to the menopause, but are correspondingly more difficult to cure. While heteromorphous tissues may grow rapidly after this period, inflammation is singularly chronic.

When he finds that a patient has a hard and enlarged cervix, instead of encouraging her to believe that, with the cessation of menstruation, are to cease her sufferings, he takes care to predict occasional relapses for many years to come, which relapses may sometimes be attributed to a chill, to overwalking, or to too frequent coition. And he has observed that, in some patients, the spring and autumn are the periods when these attacks recur.—*Br. Med. Jour.*

The Cure of Stammering.—The mode of treatment followed by M. Chervin, of Lyons, in this affection, has lately been the subject of investigation by a commission appointed by the Department Council. The commissioners state that they find the system successful, rapid, and permanent in its effects; which opinion confirms those of earlier date, given by commissions appointed in France, Belgium, Spain, etc.

Eight patients, severely affected with stuttering, were submitted, under the observation of the commissioners, to the system of M. Chervin. They varied, in age, from ten to twenty-nine years, and none of them could speak without stammering to an extent most distressing to themselves and to those who heard and saw them. In some cases the act of speaking was accompanied with convulsive movements of the mouth and eyes; in others with spasmodic respiratory movements. Some had stammered from their infancy; in others the defect had been caused by a shock to the nervous system. Ten days after they had been placed under M. Chervin's treatment they were seen by the commissioners, and each of them could then speak distinctly without stammering or hesitation; and, on the 28th, they were pronounced cured, speaking then with natural ease and rapidity.

The system is as follows. All mechanical contrivances are discarded; but he teaches the patient, by means of a large number of exercises, gradually to pronounce with distinctness vowels, consonants, syllables, and sentences. He pays great attention to the act of respiration, which he seeks to regulate. He teaches his patients to take, at certain interva's, a slow but normal inspiration, which is succeeded by an even, continuous, and loud expiration, during which pronunciation is effected. The course of treatment occupies twenty days, the time being divided into three periods. During the first the patient is restricted to complete silence, so that the old habit may be broken; during the second period the patient is taught to speak slowly and deliberately; and during the third period he acquires the practice of speaking fluently and without clipping the words. This method is stated to have succeeded in the most difficult cases, and the good results are said to be permanent; but this greatly depends on the patient, who must occasionally make use of the means which were first used to cure him.

Danger of Morphine Injections with Chloroform Inhalations.—A good deal has been written about the union of morphine injections with chloroform inhalations to produce prolonged insensibility to pain after important surgical operations. M. Demarquay concludes, from a short series of experiments, that it is a method liable to especial dangers, arising from lowering of the temperature.

Exsection of the Fibula and Loss of Tendo-Achillis.—K. T. Coleman, M.D., formerly Chief Surgeon of Stonewall Division, C. S. A. (*Nashville Jour. Med. and Surgery*, October, 1872), mentions the case of Gen. Edward Johnson, who was wounded at the battle of McDowell, May 8, 1862, by a ball passing through the tendo-achillis, an inch above the level of the malleolus, leaving a mere shred of the tendon on either side, then ranged obliquely upward and outward, carrying away about half an inch of the fibula, about two inches above the malleolus, and splitting the upper fragment for an inch and a half. Amputation was not performed. He exsected two inches of the fibula, and removed the softened tendo-achillis. The wound upon the calf was dressed with a solution of sulphate of zinc and laudanum, and otherwise the limb was placed upon a double inclined plane, and treated as for compound fracture. The discharge was controlled and healthy action established by various lotions of sulph. zinc, sulph. copper, etc., but of this class there was no agent more valuable than the lotion recommended by Sir Astley Cooper—three drops of strong sulphuric acid to the ounce of rose-water. The limb was moulded, and the gastrocnemius, deprived of the antagonism of the tendon, was kept in *situ* by well-adjusted adhesive strips. In six months General Johnson returned to duty, and was in active service until the close of the war.

Some sort of tissue supplied the place of the lost tendon; the ligamentous material that filled up the hiatus in the fibula ultimately became ossified, and to-day the General walks as well as he ever did in his life.

Stone in the Bladder.—George E. Fenwick, M.D., Surg. to the Montreal Gen'l. Hop'l (*Canada Med. and Surg. Jour.*, October, 1872), in a paper read before the Canadian Medical Association, reported sixteen cases of stone in the bladder removed by the lateral operation, with satisfactory results. The detailed cases, with one exception, were children ranging from two and a half years up to thirteen years of age. Stone in the bladder is, in Canada, a comparatively rare disease; but it has been observed more frequently of late years in Montreal than formerly.

Dr. Botsford expressed an opinion that the ailment of stone in the bladder was very rare in New Brunswick.

Dr. Grant, President, observed that in Ottowa, during a period of thirty years, there had only been three cases of stone in the bladder. In one case, at the Catholic Hospital, no less than eighty-nine calculi were removed at one time.

Dr. Hamilton believed that in Nova Scotia the disease was still more rare than in New Brunswick. In a practice of thirty-eight years, in a growing town, in the County of Kings, he had never heard of a case. Their soil was based upon sandstone, and the water was good.

Extract of Eucalyptus.—According to the *Pacific Medical and Surgical Journal*, cigarettes of the leaves of eucalyptus globulus have been prescribed, with advantage, by several of the San Francisco, Cal., physicians in cases of asthma, etc. An agreeable odor is disseminated through the apartment in this way.

Cerebro-Spinal Meningitis.—Dr. F. P. Whitehead, Vicksburg, Miss. (*Richmond and Louisville Medical Journal*, August, 1872), advocates the use of the fluid extract of gelseminum in this disease, and cites a case in which this remedy was very grateful to the patient.

Hæmatometra.—Dr. Wheeler, of Boston (*Journal of Gynæcological Society*, July, 1872), publishes two new cases of hæmatometra in the closed canal of a bicornite uterus with double vagina, observed in the Gynæcological Polyclinic of Dr. W. A. Freund, in Breslau. As regards the pathological anatomy, these cases presented but two peculiarities: first, the entire separation of the two uteri in the first case, a form not before observed in combination with hæmatometra. Even here the vaginal portion of the left uterus was so distended as to be nearly indistinguishable on the side of the tumor, and it was only after the operation that the true state of affairs, *i.e.*, the entire separation, could be made out. In the second case, where there was a real junction of the two cervices, the disappearance of the left vaginal portion was still more complete, and the os, existing as a depression on the side of the tumor, was the guide to the uterus. The second peculiarity was the smaller morphological condition of the tumors in the vagina, both being larger below and contracted above, like a ninepin or a partially filled bladder.

In these cases, the success of the treatment being complete, a long incision was made, and the completion of the discharge left entirely to nature; the patient keeping quietly in bed till the process was completed; and finally after the next menstruation, which in both cases followed immediately upon cessation of the abnormal discharge, a piece was excised in the first, and will be in the second, in order to insure a permanent outlet. Schroeder has reported 14 cases of the disease. Neugebaur, of Warschau, adds two cases of his own, and mentions six others reported since Schroeder. More recently still, Breisky, of Berne, has published two cases. In all these, with the two here reported, 26 cases. In 16 the diagnosis was correctly made. Operation was performed in various in 19, of which 7 ended fatally. Of the other seven, not operated cases, in one the tumor was accidentally opened through the uterine septum in an attempt to sound the healthy uterus; and patient recovered; one died at twenty-four, of heart disease; and two died as the result of the malformation. The complete reports of the other three cases are not accessible to the compiler.

Ligation of Carotid Artery.—Dr. Pigné-Dupuytren, San Francisco, Cal. (*Pacific Med. and Surg. Jour.*, Aug., 1872), at the June meeting of the San Francisco Medical Society, exhibited a patient, a cook by occupation, aged 44, in whom he had successfully ligated the right common carotid for aneurism, the size of the fist, on the right side of the neck, and extending from the clavicle to the lower maxilla. The ligature fell off the seventeenth day. On tying the ligature, the pulsation in the tumor at once ceased; in nine days it had returned slightly, and in three weeks it was marked; but meanwhile the tumor had considerably diminished in size. At the end of the second month the tumor was no larger than a nut, and in five months it had entirely disappeared.

Follicular Cyst.—Dr. Guersant (*Med. News and Library*, Sept., 1872), in the treatment of these, and all subcutaneous cysts, in children as in adults, is in favor of employing Vienna caustic. This method is much longer than when a cutting instrument is used; it may leave a more decided cicatrix, but it obviates mortal symptoms, and as a matter of good surgery, preference should be given it.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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

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THE SYSTEM OF SUBSTITUTION IN PRESCRIPTIONS.

THE communication from PROFESSOR BARKER, in another part of this journal, brings to the notice of our readers some very interesting, if not startling, facts bearing upon one of the phases of relationship existing between physicians and druggists. We would gladly suppose the cases to which he refers to be exceptional, did we hear of them for the first time. To many who have not been thrown into positions which compel them to be more or less at the mercy of unprincipled pharmacists, it will be difficult to comprehend the cause for such underhanded dealings. Even to such as are still compelled to write prescriptions, and who have not taken the pains to ascertain whether or not their patients get the proper medicines, the facts presented to them, while they will be no less surprising, will open their eyes to a fraud, the existence of which, from its very meanness, was unsuspected. We have objected to prescribing over the counter, of repeating prescriptions without authority, and of using inferior drugs; but we have been forced to acknowledge that such were mere accidents growing out of stubbornness and conceit, and what by a stretch of the imagination might be deemed, by the Knights of the Pestle, a practical illustration of what they pleased to call their individual rights. The substitution of one article for another in our prescriptions is probably an evidence on their part of another step in the same direction.

To these progressive gentlemen we would say, in the humble and becoming spirit of a profession always ready to learn, that we think it rather unkind that such a privilege should be denied us by our would-be teachers. We have acknowledged ourselves bad chirographers, admitting that we have a weakness for considering ourselves geniuses on that account; we are sometimes so far from being infallible that we make mistakes in our prescriptions, and not unfrequently are forced to excuse our shortcomings on the plea of ignorance, carelessness, and stupidity. But these conclusions have been forced upon us by the well-timed arguments of our friends the pharmacists. When we are overcome and driven to the wall, we have at least the satisfaction that we have been worsted in a fair stand-up fight; but in this matter of substitution we are rather ignominiously denied the usual privileges. If we ask for bread, and, naturally expecting to get it, receive only a stone, we have a right to ask the reason why. Herein is the great injustice done us.

There may be a good reason for asserting that the terminology of a word has no significance; there may be in the law of substitution a very acceptable and reasonable explanation why members of the same family may lose their individual identity for the good of one; why different things are similar; but why can we not know it, and, before knowing and admitting it, have an opportunity for a little reasoning in the premises? If we are really in the position of the philosopher with a large cat and a small cat, who cut a large hole and a small hole in his door for their respective accommodation, and our pharmacist would be willing to prove to us that the large hole would do for both, we can save ourselves much needless thinking. We refuse to be taught chirography; we feel too tender on that subject to admit the bland approaches of the blandest world-betterers; we are content to be joined to our idols, like Ephraim, and desire to be let alone; but when it comes to the interesting question of substitution and the apparently ingenuous laws which govern it, a new and inviting field is opened up to all who are unfortunate to be uninitiated. We shall not be unwilling listeners to the expounders of the new doctrine if we are given in turn the opportunity of upholding our side of the argument. But, if we object to the views advanced, we promise to do so on legitimate and rational grounds. If any one merely assures us that the sun is late in rising, because it is a few minutes behind the time marked by his watch, we may object to the premises, and may strive to prove that possibly the watch is a little slow.

The very fact, however, that we are denied the right of being convinced, may open the eyes of certain ill-feeling and cynical individuals to the suspicion that all is not as it should be, and some may be rash enough to assert that we are actually the victims of misplaced confidence.

THE HEALTH DEPARTMENT.

THE present State legislature will doubtless have no small amount of work to consider the usual number of bills which will be presented to them. Prominent among these, doubtless, will be the charter which the triumphant political party has spent so much time in framing. Where so much is promised

in the way of reform, the good citizens have a right to expect much. The interest which medical men will take in the proposed changes which this charter contemplates will be centred in the provisions for a new health law. This latter is certainly needed, and the reforms in this department should be as radical and as sweeping as in many of the others which have for the past few years formed a part of a notoriously inefficient and corrupt city government.

HUDSON COUNTY MEDICAL SOCIETY.

In many respects the District Medical Society of the County of Hudson, N. J., has adopted the commendable features of the Medical Society of the County of New York, in the various articles of the Constitution, but the following amendments would seem to be demanded:—In regard to the number of members constituting a quorum, five is too small a representation when important business is to be transacted, as injustice might unintentionally be done to absent members. One-fourth of the whole number would be better. The last paragraph of Article III., in reference to the investigation of breaches of medical ethics by the Comitia Minora, states that "the acceptance and adoption of every such report shall be decided by the Society without debate." The words *without debate* might, with propriety, be expunged.

The Table of Fees, revised and adopted in 1868, covering five pages of the pamphlet, however closely followed by members, will be found an encumbrance to the organization—judging from the experiences and histories of other medical societies.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, Oct. 23, 1872.

Dr. A. L. Loomis, President, in the Chair.

(*Continued from page 580, vol. vii.*)

Dr. Jacobi thought that the cyanosis was the result of the destruction of so much lung tissue by the emphysema.

Dr. Lewis Smith believed that it was well known that such apertures had nothing to do with the production of cyanosis.

Dr. Loomis remarked that it would be quite interesting to know the exact character of the murmurs, and their direction. There should have been a pulmonic murmur, and the question would arise if they were not all of that character. The only pulmonic murmurs he had seen, and which were confirmed by autopsy, were results of pressure upon the pulmonary artery.

HEPATIC ABSCESS.

Dr. Lewis Smith presented the anterior portion of the left lobe of the liver removed from the body of a boy who died October 15. Two years before his death, when in the country, he was severely injured by a fall, which fractured his left humerus and bruised his body. His convalescence was satisfactory, and he was apparently entirely well till the disease commenced of which he died. On Saturday, October 5, he played in the Central Park with other boys, and on the following day went to Sunday-school, appearing well and having his usual appetite. On Monday, October 7, he went to the public school, which he attended, and when there complained of headache, had epistaxis, and seemed feverish. He ate but little on returning from school, and was restless during the following night. On Tuesday, the 8th, the physician who had been summoned found him feverish and with pain in the head and epigastrium. The epigastrium was prominent, as if from an abscess or tumor underneath, and tender on pressure. There was no vomiting, and the bowels were opened by a purgative. At this time there was little or no meteorism, and the pain and tenderness were limited to the epigastrium.

From the 8th to the 13th, when I was called in consultation, there was no new symptom, but the patient had become progressively worse. The pain was more acute, and the tenderness had extended over the upper part of the abdomen. The features were pallid and expressive of suffering. The pulse was over one hundred and forty and feeble, bowels constipated, and this day, for the first, vomiting occurred. The upper part of the abdominal cavity was somewhat distended with flatus, and was the seat of severe pain, which elicited moans. The diagnosis of peritonitis was easy, which had evidently commenced in the upper part of the abdomen, and was rapidly approaching a fatal termination. Death occurred on the 15th.

Autopsy.—At the epigastrium the anterior part of the left lobe of the liver was attached to the abdominal parietes in front by recent adhesions, over a space perhaps of two inches in diameter. On separating the adhesions, about two ounces of thick pus escaped from an abscess in the liver at this point. The abdominal wall over the abscess seemed perfectly healthy, presenting no appearance of contusion; the surface of the left lobe was covered in its anterior part above and below by a thin and soft fibrinous exudation, which could also be traced a little distance upon the adjacent viscera. The liver, except in the immediate vicinity of the abscess, seemed healthy, as did also the vessels entering the liver; the other abdominal organs inspected *in situ* showed no evidence of disease; the walls of the abscess examined by the microscope were found to contain a large amount of connective tissue, the result of inflammatory action, numerous nuclei of this tissue and of the hepatic cells and hepatic cells undergoing disintegration; the surface of the abscess examined after the pus had escaped presented a grayish, uneven appearance, lacking the hyperæmia which is common in the walls of recent abscesses.

Remarks.—The cause of the abscess and its location are points of chief interest in the above case. Statistics show a great preponderance of cases of abscess in the right lobe of the liver over those in the left lobe, and when an abscess occurs in the left lobe we ordinarily also find one or more in the right lobe. The common cause of hepatic abscess in this climate is some inflammatory and ulcerative disease in one of the organs from which the portal vein arises. The hepatitis in these cases is embolismal, resulting from softened thrombi intercepted in the capillaries of the liver, and the abscesses are more frequently multiple than simple. In looking over the recent transactions of the London Path. Soc., for a period of five years, I find the histories of nine cases of hepatic abscess, having the following causes:—

	Cases.
Gastric ulcers	2
Ulceration in large intestines	3
Gangrenous ulceration of urethra and bladder	1
Ulceration in appendix vermiformis	1
Ulceration through cystic duct from gall-stones	1
Unknown	1

Suppurative hepatitis resulting from injury is known to be very rare, but in the case which I have related there can be little doubt that the abscess was traumatic, and hence its unusual location, which was in the exposed part. Lesions in the portal system, such as usually give rise to hepatic abscess, would hardly have escaped my notice if present; besides, there were no symptoms of such lesions. The boy, however, when questioned, could recollect no serious injury since the fall two years ago; but as he attended one of the public schools, where the plays are notoriously rough and exciting, it is not improbable that he may have received a blow in the epigastrium which he had forgotten. It is the opinion of the curators of Bellevue Hospital who have examined this specimen, and who see the lesions of this disease more frequently than any other physicians in this city, and probably country, that the abscess was not recent. They base this opinion on the amount of fibroid induration in the surrounding parenchyma and the little hyperæmia. It seems, therefore, that this abscess had been latent for an undetermined period, and that symptoms occurred when it approached the surface and gave rise to peritonitis.

I have been taught by this and other cases not to manipulate, or to manipulate very cautiously, suspected abscesses in the abdominal cavity, or deep in the walls of the thorax or abdomen, since their rupture internally is almost necessarily fatal, and they may in time, under proper sustaining and palliative measures, discharge externally or upon one of the mucous surfaces. The treatment in the above case consisted in leeching, moderate counter-irritation, poulticing, the use of opiates, and finally of sustaining measures.

The Society then went into executive session.

Stated Meeting, Nov. 13, 1872.

ABORTION—THE OLD STORY.

Dr. Finnell presented the uterus of a woman, aged 20, married two months, upon whom abortion had been produced. The operation was performed by some abortionist by means of some sharp instrument. The day following the patient was attacked with metro-peritonitis, and died in the course of the week. The abdominal cavity was filled with sero-purulent fluid. The cervical canal showed a deep ulceration from the instrument used in the operation.

RECURRENT FIBRO-CYSTIC TUMOR OF BREAST.

Dr. Benjamin Howard presented a tumor including the entire gland which he had removed from a female patient.

The patient was 42 years of age; had ceased menstruation; had two children, youngest being about four years of age. About two and a half years ago, a tumor which was considered a myxoma had been removed from the same side by Dr. Neftel, of this city. All was well until about eight months since, when a growth reappeared, which during the past two months had rapidly increased. He saw it. In consultation with Dr. Neftel, about two weeks since, I pronounced it fibro-cystic in character, and recommended its immediate removal. This diagnosis was qualified by a reservation concerning one point where hardness, pain, and adherence of the integument suggested a tendency to scirrhus. On removal, ten days since, aided by Drs. Neftel, Asche, etc., the tumor as now seen was found to present the appearance of an encysted fibro-sarcoma, the contents of the various cysts being either of a serous or colloid character. Although the tumor was quite an extensive one, the sutures were removed on the sixth day; the discharge was so slight, no cleansing of the wound was required, and the union by adhesion so complete, the dressings needed not to be repeated. The first tumor from this breast was reported upon, Dr. Howard thought, by the Microscopical Committee; that was the chief reason why he presented the present specimen; and having had no time for it himself, moved it be referred for examination to that committee. It was accordingly so referred.

MEDULLARY SARCOMA OF ANTRUM—OPERATION.

Dr. Sands exhibited a specimen of an amorphous-looking mass which he had removed by operation. The patient was sent him by Dr. H. Knapp, with the following history:—

Peter Heller, æt. 22, last May first noticed a pain in his left cheek, on account of which he had a tooth drawn, but was not relieved. At the same time the eye began to protrude: the left side of the nose became obstructed. The swelling of cheek, nose, and exophthalmus continued to increase gradually. The left eye is now four or five lines in front of the other. Mobility unchecked. Nothing abnormal in mouth. With difficulty forces air through his left nostril. Soft tumor of mucous appearance seen and felt in left nostril. RS=$\frac{20}{20}$, L=$\frac{10}{70}$ or $\frac{20}{100}$. Pupil moves readily. Shape, appearance, and tension of left globe normal. With the ophthalmoscope upper half of optic disk normal, the lower half raised and opaque (œdematous?) Close behind the infraorbital notch, hard, slightly nodular tumescence, extending from lachrymal region to bony edge of orbit, obliquely upward and backward, as far as the junction of outer and inner three-fourths of orbit. F. V. narrowed in its lower portion. Has circumorbital neuralgia at times, with pain on the left side of the face almost constantly since the tumor appeared. Lately, the nightly exacerbations have been severest at ten o'clock P.M.

Dr. Sands remarked that the patient had been treated by an eminent surgeon for what was supposed to be periostitis of the superior maxilla. On examination, however, Dr. S. was quite satisfied of the presence of a tumor in the antrum. The left nasal cavity was examined by the finger anteriorly, when a soft swelling was discovered, which was supposed to be, as it afterwards proved to be, the tumor itself. An examination posteriorly gave negative results. With the exception of the protrusion of the eyeball, there was little in the man's face to denote the presence of an extensive amount of disease; the anterior wall of the antrum was not much protruded, but the furrow corresponding to the anterior wall of the antrum was effaced. The history stated that the tumor had not encroached upon the mouth, and so at first thought Dr. S.; but a more careful examination revealed an important fact as regards diagnosis, viz., that the floor of the antrum was really deflected, projecting downwards into the cavity of the mouth. On examination of this protrusion into the mouth, an elastic sensation was discovered which helped to confirm the diagnosis.

The operation was performed on the afternoon of the presentation of the specimen. An incision was made extending from a little below the inner canthus along the furrow by the left side of the ala nasi, around the wing of the nose into the left nostril, then

as far as the median line, splitting the upper lip at that point. This was the only incision in the skin of the face. The anterior wall of the antrum was then exposed and removed without any difficulty, the section of the bone having been made through the pyriform aperture of the nose by means of a stout cutting forceps. This done, the tumor was easily examined. It was found to be very soft, and so friable that the finger could be run through it in every direction. The mass was removed partly by the fingers and partly by the scoop. The hemorrhage at one time was so copious as to oblige the operator for a time to desist.

To his disappointment, Dr. S. found that the tumor extended very far up towards the root of the nose. The superior and middle turbinated bones were broken down and removed piecemeal. After proceeding with the operation as far as the root of the nose both Dr. Knapp and Dr. Sands, appprehending that the cribriform plate of the ethmoid might be involved, thought that it was best to go no farther. The external and inferior walls of the antrum were found healthy. The last step of the operation consisted in the removal of the inferior turbinated bone *en masse*. Dr. E. Gruening reported the patient comfortable that evening.

Dr. Knapp remarked that while the upper part of the field of vision was normal, the lower part presented distinct signs of neuro-retinitis. The tumor itself was very large, but it did not appear to affect the infra-orbital artery or nerves. The operation did not seem to have interfered with them either. The growth increased so rapidly that a speedy operation was imperative. He had no idea that the tumor extended so far up, and would not be surprised to find that the frontal sinus was involved. It seemed to him to be a medullary sarcoma.

Dr. Sands remarked that immediately after the operation the eye resumed its natural position in the orbit.

INTRA-OCULAR ENCHONDROMA.

Dr. Knapp presented an intra-ocular tumor, the first on record. The operation for its removal was performed in Baltimore by Prof. Chisholm. The patient was a male aged 25. The enlargement first made its appearance at birth, when the sight was dimmed and a whitish appearance was noticed through the pupil. The tumor grew slowly but steadily, until the age at which it was removed. The deformity occasioned by its presence was very great, as was shown by photographic representations exhibited by Dr. Knapp. The operation was made in the presence of Prof. Gross, of Philadelphia, after the manner of enucleation of the globe. The fifth day after the operation hemorrhage occurred, which was stopped with some difficulty. On the ninth day there was another secondary hemorrhage of a more severe character. It so happened that it was impossible to control it during the whole night, and, the morning after, Dr. Chisholm was compelled to tie the common carotid, which stopped the bleeding. Three days after, the patient died of tetanic spasms. Dr. C. sent the specimens to Dr. Knapp, who reports the following results of a microscopical examination:—

The *tumor* consisted of three parts: 1, a fibrous enveloping capsule, from which septa run in different directions through the tumor; 2, a number of hard, round, or oblong nodes; and, 3, a softish fibro-granular substance lying on the lower side of the tumor, and extending between some of the harder nodes. Under the microscope, the enveloping capsule showed the structure of dense fibrous tissue like that of the sclerotic. The inner layers of the capsule were less dense, and interspersed with smaller and larger cells. The same structure, namely that of proliferating connective tissue, was seen in the fibrous septa of the tumor. The hard nodes consisted of fibrous and hyaline cartilage, the fibrous prevailing over the hyaline variety. The soft granular portion was made up of proliferating connective tissue, in which islets of fibrous and hyaline cartilage were embedded. Dr. Knapp entered into the details of the microscopic structure of the specimen, illustrating it with drawings on the blackboard, and demonstrating other drawings which he had previously made on paper.

With regard to the *origin* and *development* of the tumor, he thought it most likely that it sprang from the inner layers of the sclerotic. The fibrous cartilage was formed by immediate conversion of connective tissue; that of the hyaline cartilage by the growth of clusters of hyaline cartilage cells strown into the connective tissue and fibrous cartilage; furthermore by the extension of the growing hyaline substance into the fibrous cartilage, and lastly by the immediate development of aggregated formative cells into cartilage. The latter mode played the main part in the growth of the tumor. Dr. Knapp added that a detailed description of this unique case of intraocular enchondroma, with illustrations, would appear in the first number of the third volume of the *Archives of Ophthalmology and Otology*.

APOPLEXY WITH SOFTENING OF BRAIN.

Dr. Van Geison presented a brain, and read the following history of the case furnished him by the attending physician:—

"I was called, Oct. 31st, to see Alonzo Chandler, 23 years of age, and to all appearances a *most perfect* specimen of a strong muscular young man. Mother says he 'never had a doctor.' On this evening after a hard day's work at his trade (he was a shipjoiner), he ate a hearty supper and went with his mother to a festival at the church opposite my office. In going down the stone steps into the basement of the church, his foot slipped off the last step, and he came down hard, but on his feet. He went into the festival, conversed for a few minutes with his friends who were there, sat down at table, put his head on his hand, and was found to be unconscious. I was summoned, and arrived in a few minutes. Found him in profound coma and vomiting freely. Pupils contracted, not acting to light. He was carried home, and I followed. The right pupil remained contracted and left gradually dilated until death, which occurred at midnight, three hours from beginning of attack. Rigid muscular tetanic spasms, with gritting of teeth, and vomiting, occurred at intervals.

"*Post-mortem* held Nov. 1st, 10 A. M., ten hours after death.

"Questions asked his friends obtained information that for the past few months he had complained somewhat of 'dull headaches,' which he thought due to catarrh, but no notice was taken of the matter."

Dr. Van Geison remarked that he saw the man the next morning, and made a *post-mortem* examination. The heart was moderately hypertrophied, with the left ventricle very much thickened; there was a patch of atheroma in the aorta, and the valves, so far as could be judged, were tolerably healthy, and there were no traces of vegetations. Both of the kidneys were granular and beginning to contract. On removing the calvarium, the surface of the brain was perfectly healthy so far as one could judge from external appearances. On making an incision through the hemi-

sphere, a large clot was found, immediately surrounding which was a very large patch of cerebral softening, of a reddish yellow color. On examining the softened portion of brain there were no evidences of pus, although it seemed to the examiner that the process had been going on for a long time. The interest in the specimen centred in the latency of symptoms with such an amount of organic change present.

Dr. Delafield was of the opinion that the clot was the cause of the softening, an opinion in which Dr. Van Geison, from the appearances of the specimen when recent, could not concur.

SIMPLE DILATATION OF HEART FROM A STRAIN—A SINGULAR CASE.

Dr. Delafield next presented a heart taken from a patient of the Roosevelt Hospital, who had been a gardener by occupation. He was twenty-six years old, and had seemingly enjoyed perfect health, until two weeks before his admission, when, in attempting to lift a heavy wheelbarrow, he was seized with sudden dyspnœa, so sudden and excessive that he was compelled to drop the barrow on the spot and sit down. From that time his difficulty of breathing continued, and he was in consequence of it unable to lie down. He remained in that condition until his admission, Oct. 23. When admitted, his dyspnœa was so urgent that he was obliged to sit up in bed, his face was flushed, his eyeballs protruding, and his whole expression was very anxious.

On making a physical examination, there was found dulness over the lower lobes of both lungs; the voice sounds and respiratory murmurs diminished, although not entirely absent. On examining the heart, it was impossible to fix the apex beat. The action of the organ was tumultuous, its impulse being sufficient to move the chest wall considerably. The line of precordial dulness was four inches to the left of the median line and a little beyond the right border of the sternum. The liver was increased in size, the line of dulness reached to the fourth rib. The urine was scanty and high colored; there was, however, no albumen, no casts; and no œdema of the feet or legs. The patient remained in this condition for a few days, when the dyspnœa increased, and he grew rapidly worse, dying on the 3d of November—twenty-five days from the beginning of the attack.

The autopsy was made twelve hours after death. The brain presented no special lesion. Both pleural cavities contained a large amount of clear serum—on one side filling two-thirds, and on the other, one-half of the chest. The lungs did not seem much compressed. There were old adhesions over the upper lobe of the right lung, which was œdematous. Both lungs were dryer than usual. There was a moderate amount of muco-pus in the bronchial tubes, the mucous membrane of which was somewhat reddened. The liver was increased in size principally in the direction of its perpendicular diameter, and presented the ordinary appearance of such organs congested from heart disease. The abdominal cavity contained a considerable amount of clear serum. The spleen was enlarged and firm. The kidneys were also considerably increased in size, stony in hardness, and intensely congested. The microscopical examination of the liver and kidneys gave the ordinary appearances of these organs in a condition of chronic venous congestion. The same was the case with the kidneys.

When the chest was opened, the heart occupied a larger space than it usually does, and presented a peculiar globular appearance. The pericardium contained a moderate amount of serum, the sac being about a quarter full. The cavities of the heart contained a moderate amount of red clotted blood, except the right auricle, and were distended. Both ventricles and the right auricle were dilated. The walls were nearly normal in thickness, the wall of the left ventricle being $\frac{1}{10}$ of an inch, and the wall of the right ventricle a little over $\frac{1}{16}$ of an inch; the former being a little thicker, and the latter a little thinner than the average. The appearances of the heart wall were normal. A minute examination of the muscular tissue of the wall of the heart showed no change. The valves presented no change, except some slight thickening of the mitral, and a little atheroma at the base of the aortic valves, not however enough to impair their usefulness. No change in the aorta, except some few small patches of atheroma. The aortic valves were sufficient. The condition of the organs described left no doubt that there was a very intense and continued venous congestion, which must have been produced in some way by the heart, the heart itself showing no lesion but simple dilatation of its cavities. Dr. D., in conclusion, stated that he was unable to explain the condition of the heart with the apparent suddenness and persistence of the attack.

PHENOMENA ATTENDING SECTION OF THE RIGHT RESTIFORM BODY.

Dr. Mary C. Putnam presented a dog to the Society, with the following remarks: In the absence of one of the experiments prepared for us by nature, which we call disease, I would ask permission, Mr. President, to present to the Society a specimen of a rather curious disease, which has been the result of an experiment. The experiment in question was performed upon this dog, in my laboratory, though not by myself, on the 19th of last October, and consisted in a transverse section of the right restiform body. This operation, which is classical, was followed by the usual results. The pupil of the right eye immediately dilated, and this eye was drawn upwards and outwards; 1, irritation of inferior oblique, and passivity of superior oblique; 2, immediate loss of motor power of right posterior limb; 3, from section of lateral column that passes almost entirely into restiform body. Attempt to turn round from left to right only partially successful, owing to inability of dog to stand. But the head was strongly drawn towards right side, and the fore-paws went round in same direction.

As these rotatory movements are the well-known results of a well-known experiment, Dr. Putnam did not wish to insist upon them. There were, however, two points in this connection, to which, she said, I would call attention. At about the same time that this experiment was performed, I myself operated upon two rabbits, in one of whom I divided the middle peduncle of the cerebellum, in the other one of the corpora quadrigemina, in both cases on the right side. In the first case, the animal immediately executed movements of rotation around the longitudinal axis of its body, rolling over and over on the floor. In the second case, the animal leaped sideways, the entire body being translated to the right. Both these movements were notably different from those in the first case, where the animal described a circle, of which his own body was the radius, the posterior extremity being situated at the centre, the fore-paws placed on the circumference. In these two rabbits, moreover, the pupil, instead of being dilated, contracted.

The second point upon which I would insist, in regard to the dog, was that the muscles on the right side

of the body, from the neck backwards, were all contracted. In view of the many theories which exist to explain these rotatory movements, this fact is of interest; for it tends to justify the opinion which ascribes them to the predominance of muscular power on the side to which the animal is irresistibly forced to turn. This contraction was very much less marked in the rabbits. The subsequent history of the dog is more noteworthy, since it is rare that animals recover so completely as he has done from the operation. We had expected to find some hyperæsthesia of the opposite side on the following day, but no appreciable modification of the sensibility was discovered. On the third day the dog was partially recovered from the traumatism, and crept out of his box, but was still unable to stand. The head remained persistently drawn to the right. The dilatation of the pupil gradually subsided, and the eye resumed its normal position. By the 26th, seven days after the operation, the dog ran about freely, though dragging the right hind-leg, and with head as before. Seemed timorous and excitable, ran to hide his head against any person who spoke to him, as if afraid and trying to shelter himself. On this day was suddenly seized with a curious spasm. He stood still, a convulsive tremor ran down his right side, the muscles of which contracted spasmodically and with evident pain, for the animal began to run around frantically, always entering to the right, and then crouched in a corner, curling himself up so that the head touched the right hip, and remained crying for half an hour. He was not observed on the 27th, but on the 28th he had three similar, but much slighter attacks in the course of half an hour. The spasm occurred and lasted about a minute, after which the animal lay down as before, but without screaming, and the whole attack had passed off in about five minutes.

By the 30th the wound was nearly healed, and the motor power of the right hind leg was restored. The head did not resume its normal position until more than a fortnight after the operation. But before this time, the dog had already manifested the extraordinary vivacity which has since characterized him, and exaggerated moral sensibility. His mental and moral condition reminds the observer strongly of a patient in the initial stages of a diffused peri-encephalitis, and it is not impossible that ascending cerebral lesions may be in process of formation.

But the special point of interest in the dog's present condition, is an alteration of nutrition that has taken place in the skin corresponding to the lesion of the cord. On the 30th, when convalescence was fairly established, it was first noticed that the hair was falling off on the neck, and on the right side of the wound. In the course of a few days, a parallelogram was formed, extending from the original point, just behind the ear, down the neck, to the point of the shoulder. This zone was about two inches broad, and as the hair fell away, the skin was observed to be rough, thickened, and wrinkled. The alopecia has not been complete, and does not seem likely to become so.

This curious fact enters into a class of others, now becoming numerous, tending to prove, in the most direct manner, the influence of alterations of the nervous system upon the nutrition of tissues in their vicinity, even those that do not seem in close connection with them. In the Journal of Brown-Séquard, for ———, M. Charcot records some cases of eruption of bullæ, or the vesicular eruption of herpes zoster, consecutive to irritation of the radial * and sciatic nerves. In the *Archives de Physiologie* for 1868, the same writer enters more deeply into the subject, relates cases of profound lesions of the articulations occurring in the course of locomotor ataxy; and refers at the same time to cases of eschars occurring on the fourth day after traumatic myelitis; to others of localized œdema after apoplexy, etc. I have myself under observation such a case, where marked œdema of the arm followed hemiplegia. Parts showing this relation to the nutrition, especially of the hair, have, I believe, been recorded in the *Comptes-rendus* of the Société Biologie. But the most recent case in point, you will not forget, Mr. President, has been offered us by M. Brown-Séquard himself, when he did this Society the honor to exhibit before it some of his famous epileptic guinea-pigs. In one that had been rendered epileptic by section of the sciatic nerve, and was recovering spontaneously, M. Brown-Séquard showed that a fall of hair in the epileptogenic zone marked the entrance upon convalescence.* In this respect, therefore, this case of the dog resembles that of the guinea-pig. But in the latter case, the alopecia existed, not over the lesion, but over the point whose reflex activity had been excited by the lesion. In this dog, the alopecia was in the immediate vicinity of the lesion. But then the seat of irritation probably coincided with the seat of the lesion, instead of being remote from it, as in the case of section of the sciatic nerve.

Dr. Knapp expressed astonishment that section of the restiform body should have been followed by *dilatation* of the pupil. He had performed this experiment several times, and had always observed contraction. Pathological lesions of the spinal cord were, moreover, always accompanied by contracted pupil.

Dr. Putnam observed that there was a great difference between the results of a section and of a gradually forming sclerosis. In the latter case, the influence of the spinal cord was simply abolished, and the pupil left to the influence of the cerebrum, which always tends to contract the pupil. Whereas, immediately after section of the restiform body there is irritation, and consequent exaggeration of the functions of the spinal cord, which overpowers that of the brain. When the section is made higher up, as already noticed, the ascending irritation of the encephalon predominates over the descending irritation that might be communicated to the cord, and the pupil contracts. The same thing happens after section of the sympathetic in the neck, the instantaneous contractions being much more marked than that which afterwards exists as the consequence of paralysis of the nerve, and being really due to reflex irritation of the brain, propagated by the central end of the sympathetic.

Dr. Jacobi remarked that the case exhibited brought up the question of the influence of trophic nerves.†

* After compression of cutaneous fibres in a cicatrice, herpes zoster, as is well known, is now generally attributed to some lesion of the posterior roots.

* This observation is comparatively recent, for in 1868, in the *Archives de Physiologie* M. Brown-Séquard refers to the *anæsthesia* of this epileptogenic zone, but says nothing of the alopecia of convalescence.

† The existence of special nerves of nutrition, affirmed by Samuel, has been, as is known, much disputed of late. "Trophic centres," as in the ganglia for the posterior roots of spinal nerves, do not necessarily imply "trophic nerves." Because a tree must maintain its connection with the ground to live, it does not follow that this connection is maintained by anything but its own roots. Some of the facts above referred to, showing that lesions of ordinary spinal nerves produce decided alterations of nutrition, testify against the necessity for the intervention of special nerve fibres. Section of the restiform body would propagate descending irritation to the roots of the first and second cervical nerves, and the region of skin affected is especially supplied by their branches, the superficialis colli, and the acromial nerve.

EXTENSIVE ABSCESSES OF THE LIVER.

DR. ARNOLD presented a specimen of abscess of the liver with the following history:

Bridget McCoy, aged 45; widow; born in Ireland; occupation domestic. Admitted to the Bellevue Hospital Oct. 22d, 1872. On inquiring concerning history of parents, etc., found (parents) father died of asthma, mother died spitting blood, having suffered from dropsy just before death. Brother died of struma. Patient began to menstrate at 15 years of age; gave birth to 14 children. Never had a miscarriage. Was always a healthy woman up to last Easter, when her menses ceased. Since cessation of menses, she stated that she has suffered from indefinite ailments, frequently from headache, dizziness, and singing in the ears. Has had vomiting and diarrhœa; no swelling of the limbs or face. She further stated that for 3 months at least has had severe pain in the back, which would disappear and recur irregularly. Never noticed anything wrong with her urine. About 12 months ago, after a hard day's work, she felt very unwell, suffering from severe headache and pain in the back. Had no chills, but febrile sensation; vomiting came on and persisted. The next day she was attacked with diarrhœa, and this has continued ever since. On 18th Oct. (four days before admission into the hospital) she was seized with violent cough, and expectorated viscid, white matter, with severe pain on *right* side of the abdomen.

On admission, patient further stated that her habits have been temperate; since her menses ceased has had frequent attacks of epistaxis, and these still persist.

Oct. 25th. There is tenderness in epigastrium, all over *right* hypochondrium and upper part of right inguinal region. The superficial veins of abdomen are prominent. Oct. 26th. Complains yet of pain on right side; diarrhœa continues. A.M., pulse 104, respiration 28; temperature 101°. P.M., pulse 116, respiration 28; temperature 100½°. Oct. 27th. A.M., pulse 120, respiration 28, temperature 101°. Oct. 28th. A.M., pulse 112, respiration 28, temperature 100¾°. Diarrhœa still continues. Oct. 23d, urine, spec. grav. 1.012, acid albumen (trace). Oct. 28th, urine, spec. grav. 1012, acid albumen (trace). Oct. 29th, diarrhœa continues, physical examination shows bronchitis. Nov. 1st, A.M., pulse 132, respiration 48, temperature 98½; patient very weak. Physical examination shows presence of fine râles all over right side of chest behind, with dulness on percussion. Died at 4.05 P.M.

A second specimen also of extensive abscess of liver was presented, with the following history:

Henry Overton, æt. 32, born New York, admitted to Hospital Nov. 8th. Condition nearly pulseless. Complained only of pain in right hypochondrium. Died night of 8th.

In this case there was nothing particularly interesting connected with the autopsy, with the exception that there was some peritonitis. The abscess occupied the whole of the right lobe, extending into the left lobe.

DR. NOLAN exhibited a tumor from the anterior and upper part of the chest, which he had removed by operation from a woman aged 35. A previous operation had been performed eighteen months before; a tumor supposed to be cancerous having been removed from the same place, this growth returned in four or five months afterwards. At the first operation no skin was removed, but at the second operation all suspicious-looking integument was cut away. The mass, the size of a goose-egg, was composed of four smaller tumors, evidently malignant in character.

The Society then adjourned.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Adjourned Annual (sixty-seventh) Meeting; and Stated Meeting of Nov. 25th, 1872.

ADJOURNED MEETING.

DR. ABRAHAM JACOBI, PRESIDENT, in the Chair.

THE PRESIDENT, in resigning the Chair, said:

"The second term of my office has reached its normal end. I avail myself of this opportunity, while about vacating this chair in behalf of the President elect, to tender you my thanks for the honor twice conferred upon me, and to apologize for such shortcomings as are apt to be committed, in such a high office, by a man whose soul, it is true, may have been in the performance of his duty, but whose experience and knowledge, however, were certainly not in proportion to his good will. If there is any one whom I may have offended in performing the duties of my office, I ask his pardon; those, however, who have always looked upon my endeavors in behalf of this Society and the profession with favor or kindness will please accept my heartfelt thanks.

The last year has been, I believe, as successful as that which preceded it. The increase in our number has been steady, seventy-one members of the profession having been added to our list, while a number of names, part of them those of old and unusually valuable members, have been stricken from our rolls by death. The working of the committees has proved, on the whole, satisfactory, with the exception, perhaps, of one of them, in which a newly introduced feature—the subdivision into specialties—might have worked better. A number of reports expected by the society have not been forthcoming. As they were promised, however, we cannot say that the opinion of the Society, or of the members of the committee itself, was opposed to the change. On the contrary, further experience will have to show, whether the subdivision of the reports of the Committee on Intelligence will not prove as satisfactory to us as it is in accordance with the rapid progress of the several branches of medical science.

As far as the Committee on Meteorology is concerned, the Chair, last year, appointed its members to serve also on the Committee on Diseases. It may be that some further experience is still required to decide the question whether its abolition as an independent Committee is not a desideratum.

The following synopsis gives the most important features of the meetings held during the year past:—

December Meeting—Inaugural, and Paper on Foundling Asylums, by the President. *January Meeting*—Clinical Remarks on Diseases of the Conjunctiva and Cornea, by Dr. H. Althof. *Adjourned January Meeting*—Memorials of Drs. Bibbins, Geo. T. Elliot, A. N. Gunn, and H. D. Bulkley. *February Special Meeting*—To discuss and take action on the bill entitled, "An Act to protect the people against quackery and crime." *February Meeting*—Vital Signs in Disease, with special reference to Clinical Thermometry, by Dr. L. D. Bulkley. *March Meeting*—The Chemistry, Physiology, Therapeutics, and Toxicology of Veratrum Album and Viride, and their Alkaloids, by Dr. E. Peugnet. *April Meeting*—The Labyrinth of the Ear, Its Structure, Functions, and Diseases, by Dr. Knapp. *May Meeting*—The Physiology of Syphilitic Infection, as applied to the successive manifestations of the disease, by Dr. F. N. Otis. *June Meeting*—Resection of Maxillary Bones without Incision, by Dr. Goodwillie. *September Meeting*—Nomination of Officers, and Paper on the Neces-

sity of a Knowledge of Morbid Anatomy, illustrated by Cases, by Dr. E. G. Janeway.

The papers read before you were all very valuable. They did not all claim to have increased the stock of universal knowledge by the results of some original research, but by their own contents and the subsequent discussions they have added to *our* stock of knowledge. Real and rapid progress is the result of severe and solitary labor, such as can be performed, as a rule, only by those men whose sole or principal object in life is mental work. The scientific domain of medical societies like our own, is to foster and harbor scientific tendencies and ambition in the individual members, keep them informed, and give them an opportunity to express their own thinking on scientific facts or subjects, and by speaking improve their very thinking. Societies like ours form, as it were, the small *municipia* in the republic of science, consisting, perhaps, of not many citizens of egregious proportions or resplendent faculties, but of those who are sound, conscientious, thinking, progressive, and humane; seekers of truth, honesty, and the good of the profession and of mankind; proud of their position in the midst of anthropological science, and modest in the full knowledge that convictions are changeable, theories subvertible, and that seeking after truth is the only thing permanent.

Thus we ought to be proud to a higher degree of our facilities than of our faculties and accomplishments. Science is forever in its development, and even in its undeveloped state no single man has ever mastered it. This fact should be sufficient to extinguish vanity and self-complacency, qualities which are more common in an illiterate backwoods quack, or a gin-drinking sea-captain, than a humanitarian and physician, or a Laplace. Nor ought we, as physicians, to be so very proud of this our belonging to a profession, *the access to which is, I am sorry to say, as easy as it ought to be difficult.* What we accomplish in the profession in the interest of professional, scientific, and social progress, in the seeking for truth and its applications is the thing to be proud, although not to boast of.

What would you think of a physician who, on the standpoint of fifty years ago, would have boasted of his diagnostic accomplishments; auscultation and percussion in their cradles, and Bright's book not written? Or of a microscopist, who, twenty-five years ago, diagnosticated cancer by so-called cancer-cells, which we now know to have the only peculiarity of being impossible and non-existing? Or of a pathologist, who, twenty years ago, would explain cyanosis by a normal anatomical condition: the patency of the foramen ovale? As we would be unwilling to permit them to boast of their times, let us therefore be careful. We shall in our lives, I hope, throw off many an error, learn many a new fact and see light shed upon many a dark field. When we remember how we have outgrown our immediate predecessors in knowledge and, what is of more importance, in methods of investigation, let us be anxious not to deserve the smiles of the generation to come.

The meetings of the Society have been well attended. If any proof were necessary, the presence of one hundred and twenty members at the last election would be convincing. The same fact goes also to prove that the large majority of those in attendance were always members of the Society, not guests. The presence of the latter is surely pleasing, inasmuch as it exhibits, on their part, an interest in the persons of those who are expected to speak, or the topics to be discussed. As long as the legitimate objects of the Society are not interfered with, their visits are thankfully received. It is to be desired, however, that their interest in the person who is to be the lecturer of the evening should not be so powerfully superior to that in the subject discussed, that their presence should be thought necessary, even at the expense of private study and the requisite rest. I do not believe that the presence of hundreds of first or second course students of medicine or law aids the objects of a learned society, or their own studies, which might be more profitably given to the dissecting-room and to the notes taken in their didactic lectures. Nor do I think the members of the Society, provided they can find a seat on such occasions, are gratified by the noisy applause, on especially hitting or satisfactory occasions, equal to that in a concert-room or circus. We find that men with their hearts in a cause, and aiming at knowledge, will but rarely applaud. In fact, the opportunities for an outbreak so enthusiastic as to overcome decorum and the dignity of science, ought to be considered to be very few in number indeed. Nor, finally, can I imagine the members of a society to feel like entering a discussion when the final decision is, as it were, entrusted to the hands and feet of those who expect to come up in a year or two for their examination in the elements of medicine.

Moreover, a scientific society is a select circle of persons whose general education, in at least a number of subjects, must be considered equal or nearly so. Unless such is the case, a fertile discussion is out of the question. Nor is it impossible that many a gentleman, if he means to be intelligible to both guests and members, will avail himself of a phraseology accessible to every beginner; will avoid topics requiring more extensive preparatory studies; in fact, the character of discussions and papers *may* suffer. You say there is no necessity for that, and guests do not determine the character of the proceedings. Still, there is no man who is not influenced by large masses who have something intoxicating in themselves, and none who is superior to the wish to be understood by all who, for some reason or other, have come to hear him. While, then, it must be our object to be as numerous as we can —to count, in fact, all the members of the regular profession amongst our numbers—have as large meetings as possible—open our doors wide to every one who is competent, in the interest of ourselves and the scientific subject to be discussed, we should not encourage or crave the visits of guests whose very studies ought to confine them to other fields and narrower limits. Their interests and ours, for the time being, are not the same; if our proceedings are of such a character as to do justice to this Society and the standard of modern science, they cannot possibly gain by the presence of such persons in our circle, complimentary though it be. It is true, we cannot close our doors, nor say who is a desirable or undesirable guest; but the question once raised can be easily answered by any cool judgment. I do not hesitate to say that the meetings of a learned society are no place for a medical student, unless he be the exceptional one who, both by talent and work, is superior to hundreds of his fellows; as I have never hesitated, for a dozen years past, to advise the students of the first course not to visit any professor's clinique. If two do the same thing it is not the same. Where the necessary preparation is wanting, it is wasting time to battle with the higher branches. This may appear a delicate question. If I speak of the subject at all to-night, I hope it will be understood that I unwillingly submit to it as one of the stern duties of the office which has been intrusted to my hands for such a long time, and which I am about to deliver into those of a worthy and more competent successor.

The last year has seen no such disturbances as did a pre-

vious one. I co atulate the Society on this proof, or at least outward w, of decorum and professional propriety. No cha ges have been brought against any member, nor has any breach of professional ethics become public. No matter whether this is the result of nothing of the kind having occurred, or whether those offended or harmed have thought it below them to take notice of it, the result is a favorable one. Much valuable time has been saved, without the self-imposed discipline of the profession (which is the stricter, the looser the bands woven around us and our liberal profession by laws and statutes) having suffered in any way. We all remember to what extent, some time ago, our meetings, and a number of meetings of the comitia minora, were encroached upon by the pressure of individual claims, surely to the disadvantage of our legitimate duties. Many and various they are. I have in former times alluded to the many topics which might be subjects for discussions by this Society; and to the duties imposed upon us by our intimate connection with the political commonwealth. It is certainly our right and our duty to consider such matters as are of equal interest to both the citizens of the republic and to physicians. Amongst those I should count, first of all, matters belonging to the preservation and the restoration of health. Hygiene in general, the condition of the institutions of education, charities and correction, in particular, belong to this class.

This very Medical Society of the County of New York, and the Medical Society of the State of New York, are the legitimate authorities, without whom, as we now stand, no law, respecting in any way the public health, ought to be passed. Is the responsibility too great for us? Where is the responsibility to rest, except with those who have the required knowledge? Is it to be with the legislators, whose great merit consist in the fact that they had a majority of voters as ignorant as themselves? Or are we afraid of being accused of working in our own interest, when our discussions take hold of a subject of such vast importance to every living being; when, without remuneration and thanks, we improve the health of our neighbors, whose sickness would be of pecuniary advantage to us? Or are we to be afraid of being called the most terrible name on the tongue of a long maltreated and thoughtless public—a "ring"? As long as we work for the public good, whether we are five hundred or a thousand, we need not be afraid to be called a ring. And if we were five, instead of five hundred, this is the place in which the public interest, as far as health and life is concerned, ought to be considered and protected. In such questions of public safety, the County Medical Society ought to take a decided stand, and not fear the other terrible words, —*to commit themselves*. If there is a discrepancy of opinion, ours on one side, and the misinformed public on the other, it is much better to *commit* ourselves—that is, to pronounce our opinion, and conviction, and knowledge, without fear or hesitation. If Socrates, St. Paul, Luther, Galileo, and Giordano Bruno,—if Washington, and Paine, had feared to commit themselves, where should we be to-day? Fortunately for mankind, there have always been men and rings who have not hesitated to commit themselves in behalf of what they knew to be right, or in opposition to what they considered wrong; men, and sometimes rings, who would follow their convictions and consciences, no matter whether they expected to die with the crown of martyrdom, or that of glory on their temples. Nothing will change more easily than the vociferous applause or curse of the populace; no thanks will be more certain and perpetual than those of the genius of mankind for efforts and acts in the service of humanity.

I hope and trust that many questions of public interest will come before our forum, where they belong; that all questions of health and hygiene requiring investigation and discussion will be raised and answered here; that in true scientific ambition and co-operation, this Society will work with other equally interested societies and men; that, moreover, purely scientific subjects, that is, those whose immediate connection with the trivial bread-and-butter question of every day life is not yet found, will meet an ever-ready sympathy amongst us.

With these expectations and wishes for our welfare as a medical society, and as a professional, scientific, and public community, I retire from this chair, knowing that whatever one man can do in accomplishing tasks requiring honor, zeal, self-sacrifices, and capacity, will be done by my successor.

The minutes were then read and approved, and the meeting adjourned.

Stated Meeting.

The President elect, Dr. Ellsworth Eliot, took the Chair, and called the meeting to order.

NEW MEMBERS.

The following gentlemen, recommended by the Comitia Minora, were admitted to membership:—

Ira B. Reed, 154 East One Hundred and Twenty-eighth street; a graduate in medicine at the Bellevue Hospital Medical College, in 1868. George B. Fowler, 64 West Forty-sixth street; a graduate in medicine at the College of Physicians and Surgeons, in 1871. George V. Skiff, Metropolitan Hotel; a graduate in medicine at the Medical Department of the University of New York, in 1860. Montifiore J. Moses, 584 Seventh avenue; a graduate in medicine of the Medical Department of the University of New York, in 1863. Abraham A. Smith, 16 East Thirtieth street; a graduate in medicine at the Bellevue Hospital Medical College, in 1871. Jean B. Landetta, 275 West Twenty-second street; a graduate in medicine at the University of Paris, France, in 1863. Guiliermo Michelena, 78 East Seventh street; a graduate in medicine at the University of Paris, France, in 1847. Juan Cisneros, 473 West Twenty-second street; a graduate in medicine at the University of Havana, Cuba, in 1864. Walker Gill Wylie, Woman's Hospital; a graduate in medicine at the Bellevue Hospital Medical College, in 1871. L. Fiegenblatt (de Nasielski), 211 East Broadway; a graduate in medicine at the Medical Department of the University of the City of New York, in 1872.

MEMORIALS.

Drs. Krackowizer and W. T. White, as Chairmen of the Committees appointed for that purpose, presented the following memorials and resolutions, which were accepted by the Society:—

The Medical Society of the County of New York having learned of the demise of its member, Charles Henschel, M.D., cannot do less than bear witness to his love of science, his untiring industry, and his distinguished position as a practising physician.

By his whole life he taught the precious lesson, that sure success, not merely meaning the accumulation of wordly goods, but also the approbation and the respect of the good men of a community, is only for those

who lend their talents and attainments to the conscientious performance of self-imposed duty.

In this way Dr. H. succeeded in winning the esteem of his colleagues and the confidence of those committed to his care, to a degree shared by but few of the most eminent in the profession.

With a rigid adherence to, and advocacy of what he thought right and honorable, he coupled a rare affability, and a most liberal tolerance of the honest opinions of those from whom he differed.

He was singularly free from all guile and jealousy. It was his delight to seek out young men of talent, and by his advice and influence smooth their way to success.

As a citizen he was above reproach; he certainly loved his adopted, as well as his native country, and he identified himself fully with the destiny of the land of his choice.

Those who have had the good fortune to enjoy a more intimate intercourse with him as friends, will miss a gentleman of high culture, blended with a suavity of manner and an ease and instructiveness of conversation which made him the delight of social circles.

Bearing all this in mind, the Society, to show the sense of the loss it has suffered, attended the funeral of the deceased, and appointed the undersigned a Committee to prepare a suitable minute as an expression of their sincere sympathy with the family in their bereavement, and for preservation in the archives of the Society.

E. Krackowizer.
Ellsworth Eliot.
John T. Metcalfe.

New York, November 25, 1872.

Whereas, It has pleased an All-Wise Providence to remove by death our fellow-member, Gilbert T. Totten, M.D.; therefore,

Resolved, That in the death of our associate, we recognize the loss of one whose talents and scientific attainments rendered him an ornament to his profession.

Resolved, That we tender the family of the deceased our heartfelt sympathy in their bereavement.

Resolved, That these resolutions be transmitted to his family, and that they be published in the medical journals of this city.

W. T. White,
Committee.

(To be continued).

Correspondence.

THE ALTERATION OF OUR PRESCRIPTIONS BY DRUGGISTS.

To the Editor of the Medical Record.

Sir:—In a conversation a few weeks since with a medical student who had served two years as a clerk in one of our city drug-stores, he informed me that he was directed by the proprietor, when putting up expensive medicines, to put in only one-half the quantity ordered in the prescription. For example, if in a four-ounce mixture one drachm of quinine was ordered, he was to put in but half a drachm.

It is not to be supposed that this rule has been generally adopted by the druggists, but I have some reason for believing that the instance I have referred to is not entirely exceptional. Other information which I received from the same source has induced me to adopt the rule of thoroughly examining all powders and mixtures which are prepared from my prescriptions, and I carefully interrogate patients as to the action of pills, to ascertain whether this corresponds with the effects I anticipated from the ingredients ordered. The experience of a few weeks has convinced me that this course is not only wise but absolutely necessary. It has awakened my attention to the inquiry as to how much our success in treating disease, and, consequently, our reputation as practitioners, is in the hands of the druggist who puts up our prescriptions.

As an illustration of this point, permit me to mention a few incidents that have occurred in my practice within the past six weeks.

I was called about 3 A.M. this morning to see a little boy, five years of age, the only child of a widow, who is constantly on the watch for diphtheria. The child had a cold, with sore throat and some disturbance of the digestive organs, and I wrote the following prescription:—

℞ Potass. bicarb.,
"Tully's powder," āā..gr. x.
Hydrarg. chlor. mite..gr. iij.

M. Die in chart No. 2. S. One to be taken at once.

On visiting the child at ten this morning I found that he had not slept, was still feverish, and complaining of his throat. The anodyne effect which I had anticipated from his medicine had not been produced. This led me to examine the remaining powder, when I saw that there was no Tully's powder in it. Of course, the camphor in this would be unmistakable both to the smell and the taste. The powder is of a dingy white color, with an alkaline taste. I then rewrote the prescription and sent it to a trustworthy druggist. After taking one powder the child soon fell asleep, in a gentle perspiration; and on visiting him at five this afternoon, I found him asking for food, with no sore throat, and so well that I shall not again visit him unless I receive a new call. It was sufficiently vexatious to find that my night visit had been made entirely useless by the fault of the druggist, although the only harm done was the loss of time in relieving the child from suffering and the mother from anxiety. But suppose the case had been one of superficial inflammation of the larynx and trachea, or commencing catarrhal laryngitis, my prescription would have been very much the same, and it is my firm conviction that, in such a case, the loss of six hours' time might have resulted in converting a simple and easily-managed case into one of very great danger, viz., croup.

About three weeks since I was called to see a lady suffering from a severe form of ulcerative stomatitis. In the treatment of this affection, for a few years past, I have mainly relied upon the sulphites either of magnesia or of soda, and I have cured my cases more rapidly than I formerly did, when I depended upon the chlorate of potassa, borate of soda, etc. When writing for either of the sulphites, I have always written the word out in full, doubly underscoring the last syllable, so that the attention of the druggist should be called to the article required. In this case, I wrote a prescription for a mixture in which the sulphite of magnesia was the chief ingredient, and then assured the lady with a good deal of confidence that her mouth would be much better in a couple of days. Early on the second morning after my visit, I received a summons to visit her again, and found that she had not been able to eat or sleep since my former

visit, and that she now had a bad diarrhœa. I was much disappointed, and questioned her in regard to the medicine that she had been taking, and her answers convinced me that she had not been taking the sulphite of magnesia. Taking the phial of medicine, I called upon the druggist where it had been prepared. Being an entire stranger to the shop, I thought it safe to use a little diplomacy in getting at the truth. I first asked the "young gentleman" in charge to show me his sulphate of magnesia, which he readily did, informing me that it was the same as Epsom salts. I then asked if he had but one kind, and always put that up when ordered; both of which questions were answered satisfactorily. I then showed him the phial, asking if he was sure it was the same article which was put up in that. He looked at his prescription-book and then answered, with some temper in his tone, that it was, adding: "Do you think that we have put up oxalic acid? We never make such mistakes in this store." I then asked to see the prescription, to which he at first objected, but after a little persuasion he consented. I then asked the meaning of the two lines drawn under the last syllable of sulphite. He said: "Because it was spelled wrong. It should be a-t-e. But doctors were sometimes very careless in their spelling, and in my opinion some of them did not know any better." His last proposition I did not then feel inclined either to discuss or to dispute. But keeping a sober face, I gravely thanked him for his information, and left, satisfied—perfectly satisfied—that it was my duty to warn my patients not to have their prescriptions made up at this shop. I subsequently wrote a note to the proprietor of this store, detailing the above, to which note I have received no reply, and hence I suspect my conversation was with the proprietor.

In a third case, I had ordered for a child the subcarbonate of bismuth. At my next visit I was told that each powder seemed to distress the child, and caused severe vomiting. This led me to examine the powders, and not liking their appearance, I called upon the druggist who had put them up and asked him to show me the subcarbonate of bismuth. He took down a jar labelled Bism. Submit. On my remarking that this was the subnitrate, but I wished to see the subcarbonate, his answer was, "Oh, this is what we always put up now. The subcarbonate is an old-fashioned article that is out of date now, except with old fogies."

Now each of these incidents occurred at drug-stores of marked pretensions as to external display, situated in the best parts of the city, and which rely for their support on that class of society able to assist in paying their high rents.

I suspect that few of us reflect how much we and our patients are at the mercy of druggists. I have no doubt that most physicians, if they carefully watched, could furnish illustrations parallel with those that I have given.

The relation between the physician and druggist is one of mutual dependence. Both are liable to make mistakes, and no doubt the druggist frequently has occasion to protect the careless writer of prescriptions; but ignorance, inaccuracy, intentional omission, or unauthorized change of prescription, may be unpardonably criminal.

Our only safety is in sending our prescriptions to those druggists whom we have found to be thoroughly competent and trustworthy, and in a careful examination of the medicines after they have been prepared.

Yours truly,

FORDYCE BARKER.

MADISON AVENUE, Nov. 20, 1872.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 19 1872, to December 18, 1872, inclusive.

ALEXANDER, R. H., Surgeon, assigned to duty as Post Surgeon at Fort Vancouver, W. T., relieving Surgeon J. H. Bill, U. S. A. S. O. No. 154, Dept. of the Columbia, Nov. 14th, 1872.

RANDOLPH, JNO. F., Surgeon, assigned to duty as Post Surgeon at Omaha Barracks, Nebr. S. O. No. 204, Dept. of the Platte, Nov. 16th, 1872.

JAQUETT, G. P., Asst. Surgeon, granted leave of absence for 12 days. S. O. No. 208, Dept. of the Platte, Nov. 22d, 1872.

PHILLIPS, H. J., Asst. Surgeon, granted leave of absence for 30 days, and leave to go beyond the limits of this Department. S. O. No. 153, Dept. of the Columbia, Nov. 13th, 1872.

MEACHAM, F., Asst. Surgeon, assigned to duty as Post Surgeon at Sidney Barracks, Nebr. S. O. No. 204, C. S., Dept. of the Platte.

HEIZMANN, C. L. Asst. Surgeon, relieved from duty at Sidney Barracks, and assigned to duty at Omaha Barracks, Nebr. S. O. No. 204, C. S., Dept. of the Platte.

STYER, CHAS., Asst. Surgeon, granted leave of absence for four months from Dec. 1, 1872. S. O. No. 309, War Dept., A. G. O., Nov. 29th, 1872.

WEISEL, D., Asst. Surgeon, granted leave of absence for 30 days. S. O. No. 306, War Dept., A. G. O., Nov. 26th, 1872.

MATTHEWS, WASHINGTON., Asst. Surgeon, assigned to temporary duty at David's Island, N. Y. H. S. O. No. 228, Dept. of the East, Nov. 25th, 1872.

KING, W. H., Asst. Surgeon, leave of absence extended 30 days. S. O. No. 106, Mil. Division of the Mo., Nov. 21st, 1872.

MURRAY, ROBERT, Asst. Medical Purveyor, to proceed to Washington, D.C., and report to the Adjutant-General (pursuant to instructions from the Secretary of War). S. O. 222, Mil. Division of the Pacific, Nov. 30, 1872.

WIRTZ, H. R., Surgeon, to accompany Battery "B," 2d Arty., on 4th inst., to its station in the Dept. of the East, as medical officer, and on completion of this duty return to San Francisco, Cal. S. O. 223, Mil. Division of the Pacific, Dec. 2, 1872.

TILTON, H. R., Asst. Surgeon, assigned to duty as Post Surgeon at David's Island, N. Y. Harbor. S. O. 240, Dept. of the East, Dec. 16, 1872.

HUBBARD, V. B., Asst. Surgeon, assigned to duty at Jackson Barracks, New Orleans, La. S. O. 193, Dept. of the Gulf, Dec. 10, 1872.

VICKERY, R. S., Asst. Surgeon, to accompany batteries of 3d Arty., on steamer *Magnolia*, to New York city, and return by rail to New Orleans, La. S. O. 184, Dept. of the Gulf, Nov. 28, 1872.

MONROE, F. LE B., Asst. Surgeon, granted leave of absence for fifteen days, with permission to leave the limits of the Department. S. O. 265, Dept. of the South, Dec. 13, 1872.

CORSON, J. K., Asst. Surgeon, granted leave of absence for four months. S. O. 315, War Dept., A.G.O., Dec. 4, 1872.

DELANY, ALFRED, Asst. Surgeon, granted leave of absence for four months, with permission to apply for an extension of two months, to go beyond sea. S. O. 323, War Dept., A. G. O., Dec. 11, 1872.

MATTHEWS, W., Asst. Surgeon, when relieved at David's Island, N. Y. Harbor, to report in person at these Headqu'rs. S. O. 240, C. S., Dept. of the East.

REYNOLDS, FRANK, Asst. Surgeon, granted leave of absence for six months on surgeon's certificate of disability, with permission to go beyond sea. S. O. 323, C. S., War Dept.

JOHNSON, HENRY, Medical Storekeeper, to perform the duties of Medical Purveyor during absence of Lieut. Colonel Murray. S. O. 222, C. S., Mil. Division of the Pacific.

Medical Items and News.

BUTLER.—D. Butler, for thirty years Superintendent of the Insane Asylum at Hartford, Conn., has resigned his position.

NEW YORK ACADEMY OF MEDICINE.—At the meeting held December 5, 1872, Dr. D. B. St. John Roosa read a paper on "Chronic Non-Suppurative Inflammation of the Middle Ear."

BROOKLYN BOARD OF HEALTH.—Dr. Andrew Otterson has been appointed Health Officer of the Brooklyn Board of Health, in place of Dr. George Cochran, who died recently.

REYNOLDS.—Dr. Albert Reynolds, of Clinton, Iowa, has been appointed Medical Superintendent of the new Iowa Hospital for the Insane, located at Independence.

U. S. MEDICAL REPORT FOR 1871.—The United States Army monthly reports of sick and wounded, received during the year, represent an annual average mean strength of 24,101 white, and 2,494 colored soldiers. Among the white troops the total number of cases of all kinds reported on the sick list was 47,575; the total number of deaths reported was 367. Among the colored troops the total number of cases reported was 3,514; the number of deaths from all causes reported was 54.

DR. CHAS. HENSCHELL.—At a stated meeting of the New York Academy of Medicine, held Thursday, November 7th, 1872, the following resolutions were passed with reference to the decease of the late Dr. Charles Henschel, a fellow-member:

Resolved, That the Fellows of the New York Academy of Medicine recognize the hand of God in the death of their esteemed associate Fellow, Dr. Charles Henschel, which occurred in Zurich, Switzerland, on the 18th of September last.

Resolved, That as a tribute of respect to his memory, they wish to place upon record their appreciation of his long and faithful professional labors, as well as his kindness and cordiality, both as an associate and friend.

Resolved, That by the amiability of his private life and his untiring devotion to the care of the sick, he has endeared himself to a wide circle of devoted friends, and has left us an honorable example worthy to be cherished and imitated.

Resolved, That a copy of these resolutions, duly authenticated, be communicated to the family, and that they be published in the medical journals of this city.

E. R. PEASLEE, M.D.,
President.

W. T. WHITE, M.D.,
Secretary.

AT a meeting of the Medical Library and Journal Association of New York, it was unanimously

Resolved, That we have heard, with sincere sorrow, of the unexpected decease of our late trustee and associate, Dr. Charles Henschell. We tender our great sympathy to all the members of his bereaved family, in the sure trust that all the strong consolations which an all-kind Providence always showers around the memory of a good, kind, and wise man, will ever be present to comfort them.

Resolved, That we gladly hold up to our own members for their imitation the bright example of his truly honorable and unusually attractive character; his untiring devotion, both scientific and practical, to our noble profession; and his great skill and tender care of the sick.

Resolved, That we also gratefully acknowledge his interest in, and his generosity to, our Association.

Resolved, That a copy of these resolutions be conveyed to his family by a proper committee, and copies be sent to all the medical journals of this city.

A. UNDERHILL, M.D., *President.*
A. C. POST, M.D.
J. C. PETERS, M.D. } *Committee.*
F. A. BURRALL, M.D.

DEATH OF DR. WOHLFARTH.—AT a stated meeting of the New York Medico-legal Society, held on the 14th of November, 1872, the following preamble and resolutions were adopted:—

Whereas, This Society has authentic notice of the sudden and untimely decease of its esteemed member and officer, August Wohlfarth, M.D.:

Resolved, That this Society recognize in the death of Dr. Wohlfarth the loss of one of its earliest, and, though unassuming, one of its most zealous, faithful and efficient members and officers.

Resolved, That while this Society thus estimates its own loss, it extends its sympathy and condolence to the bereaved family of our lamented associate.

Resolved, That a copy of this expression of the Society be forwarded to the family of the deceased, and to the medical journals of this city.

T. C. FINNELL.
STEPHEN ROGERS, } *Committee.*
J. ROSS, *Recd. Secretary.*

NEW YORK MEDICAL LIBRARY AND JOURNAL ASSOCIATION.—At the annual meeting of this Association, held at the reading room, December 3, 1872, the following officers were elected for the ensuing year: *President*, Dr. J. C. Peters; *Vice-Presidents*, Drs. H. D. Noyes and A. Jacobi; *Recording Secretary*, Dr. F. A. Burrall; *Corresponding Secretary*, Dr. F. I. Foster; *Treasurer*, Dr. H. P. Farnham; *Librarian*, Dr. A. E. M. Purdy; *Trustees for three years*, Drs. A. C. Post, Wm. N. Blakeman, E. R. Peaslee, A. Underhill, H. G. Piffard, and Stephen Smith; *To fill vacancies*, Drs. I. E. Taylor and W. T. White.

DR. J. SOLIS COHEN, of Philadelphia, recently delivered, at the College of Physicians of Philadelphia, a course of ten lectures under the Mütter bequest, on the "Surgery of the Nares, Larynx, and Trachea."

POLITICS AND MEDICINE.—According to the Paris Correspondent of the *New York Daily Times*, evident radicalism prevails at the Paris School of Medicine among the students and professors, while anything like Communist language brings down the house. So well is the audience known, that professors are said to introduce politics designedly, and for the purpose of winning popularity.

Original Communications.

CLINICAL NOTES

ON THE

ELECTRIC CAUTERY IN UTERINE SURGERY.

By J. BYRNE, M.D.,

SURGEON-IN-CHIEF TO ST. MARY'S HOSPITAL FOR DISEASES OF WOMEN; CLINICAL PROFESSOR OF UTERINE SURGERY TO LONG ISLAND MEDICAL COLLEGE, ETC.

(*Conclusion.*)

As this paper has already far exceeded its proposed limits, and for other equally cogent reasons, my history of cases must close for the present. I have purposely endeavored to confine my remarks to a plain statement of such facts and occurrences as seemed to have a bearing on the value of the electric cautery in uterine surgery, including a description of the apparatus and instruments required, and rules for their practical application.

It is possible that the discursive manner in which my reports of cases and operations are given may be considered too inexact and disjointed; but I would state in explanation, that this paper is written less with a view to instruct students than for the information it may convey to active members of the profession; so that the dry daily record and minute details of cases, however useful and necessary to the one class, would be neither attractive nor profitable to the other.

Independently of this feature, however, I am fully aware that my clinical report, as a whole, is neither so full, nor by any means so complete, as could be wished; because, in addition to certain diseased conditions and operations therein described, and which in reality constitute but one-fourth of the whole number observed, there are many others of great practical interest that might also be related did time and other circumstances permit.

Prominent among the latter might be mentioned chronic catarrhal, inflammatory, and ulcerated states of the intra-cervical mucous membrane—as a class, the acknowledged opprobrium of gynæcological surgery, but yielding readily and in most instances to one application of the electric cautery.* Nor indeed does recourse to such radical measures for these obstinate ailments demand the use of any anæsthetic; for patients have repeatedly declared that no more suffering attends or follows such treatment than is observed when any other active topical application is made. So also in regard to inflamed and granular states of the urethral membrane, always a source of intense suffering to the patient, and, so far as my own experience goes, but rarely even alleviated by the most judicious methods of treatment ordinarily employed.

Yet these painful affections also, when not seriously complicated with vesical lesions, have, in several instances lately met with, disappeared no less rapidly by the same proceeding.†

I regret that, on these points, nothing beyond this mere reference to the facts can be ventured at the present time; but an early opportunity may be taken to submit some clinical illustrations of what may be reasonably hoped for in such cases.

With regard to the value of galvano-cautery as a means of excising epitheliomatous outgrowths from the uterus, I think sufficient clinical material has been presented to demonstrate, beyond all reasonable doubt, its great superiority over every other mode at our command.

My reports also indicate pretty conclusively the boldness and freedom with which we may, by this agent, safely encounter disease, however intimately connected with vital parts, the security it affords against hemorrhage, and, what appears to me of even more consequence, the very remarkable immunity it would seem almost to guarantee against peritonitis, cellulitis, pyæmia, and other fatal sequelæ of intra-pelvic operations otherwise effected.

As to the curability of cancroid diseases of the uterus by such radical measures as I have adopted and described, or the degree of permanency thereof reasonably to be hoped for, I have but little to add to the remarks already embodied in my reports. The statistics are, perhaps, as yet too limited, and, in most of my cases, the time that has elapsed since operative treatment is insufficient to warrant any very decided opinion one way or other.

It may not be presuming too much to say, however, that, judging from the apparently complete restoration to health in the great majority of patients so treated, though the condition of some was in the highest degree discouraging at the outset, I cannot hesitate to believe firmly that their ultimate history will warrant the most favorable conclusions in this regard. However, should future observation and more mature experience tend to dispel these hopes, and though cases now so full of promise should be found hereafter to have relapsed, it would nevertheless be some consolation to reflect that, in addition to having been instrumental in procuring respite from a painful malady, in no single instance had life been jeopardized by efforts made in behalf of these sufferers. Indeed, this latter remark is substantially applicable to some of the most hopeless forms of carcinoma when treated by galvano-cautery, as may be inferred from a perusal of case No. XII., and which is but one of several instances met with; for out of thirteen such cases operated upon, ten were beyond all doubt greatly relieved; and though three only were not improved, none were made worse.

The examples of carcinomatous disease of the uterus, either detailed or referred to in this paper, include nearly every variety described or met with, whether as regards their stage of development, the distinctive characters of their primary elements, or the tissues implicated. Hence it is needless to observe that, so far as the manifestly incurable cases were concerned, the parts involved or removed, the amount of relief afforded, and especially the extent to which life seemed thereby prolonged, varied in proportion to circumstances.

As to those of a less grave nature, they too, as may naturally be presumed, were of different forms and degrees of development, and consequently the steps and limits of operations proportionately varied.

Considering, therefore, all the facts observed in thirty operations, their subsequent progress, and inferences naturally deducible therefrom, the conclusion seems obvious that the electric cautery, when properly employed, is attended with less danger, immediate or remote, and promises better results than can be claimed

* In order to make such applications properly, the cervical cavity should be first well dried out by means of compressed sponge or cotton. The cervical cauterizer should then be introduced as far as may be judged proper, *and while cold*. The battery is next to be immersed, and during cauterization the instrument should be rolled half around and back, so that the parts may be equally and well brought under its influence.

† A similar proceeding to that advised for cauterization of the cervical canal should be adopted. The bladder must be completely emptied, and the urethra dried by cotton, before introducing the instrument. An anæsthetic is indispensable in these urethral cases.

for any other method of surgical treatment yet devised for such ailments.

It would be interesting, and perhaps profitable, to notice some important points touching the distinctive morbid features characteristic of each case or group; but having neither space nor desire to indulge in pathological hair-splitting or the discussion of questions irrelevant to the subject under consideration, what has been already said must suffice for the present, and may be accepted as a brief resumé of my opinions and convictions. Before disposing of this section of my paper, however, and in conformity with its aim and spirit, I would venture to submit, for the guidance of others, the following aphorisms pertinent to the operative management of this class of cases:—

1. In all cases of induration, destructive ulceration, and outgrowths of the cervix uteri of a malignant nature, or believed to be so, and therefore warranting excision by galvano-cautery or other means, such operations should never be limited to the apparent line of demarcation between sound and healthy tissue, but must include the whole vaginal cervix at least, and even more if need be. (See Case I.)

2. When the shape of a part to be excised is such that a loop cannot be made to embrace it, a circular furrow for the reception of the wire may first be made by the cautery knife.

3. The wire-loop, knife, or other instrument should never be brought to a white-heat when passing through superficial tissues or cellular growths. (See Cases XVI. and XVII.)

4. Traction on the part to be excised should be carefully avoided until the wire has passed well into the submucous structures.

5. The contraction of the loop should in all cases be very slow and gradual, *yet uninterrupted*, so as to insure a thorough cauterization of each stratum as passed through.

6. Towards the close of such operations, and as the circle of wire becomes small, let the amount of electricity be proportionately lessened.

7. Apply the knife to the spot intended to be cut *before heating*; and, if possible, be always provided with a duplicate of this little instrument.

8. Shun the use of persulphate of iron as a utero-vaginal styptic dressing, when possible, and, should any such agent be needed, substitute solutions of alum, or acetic acid, dilute or strong as circumstances may warrant.

The history of a very remarkable case of fibroid tumor has been described at such length, and the three operations undertaken for its removal in part so fully detailed, that but little need be said in addition to what is contained in the reports.

If, up to this time, proof has been wanting to convince the skeptical, and all who, on purely theoretical grounds, denounce certain forms of galvanic apparatus, because, as they say, their action is not sufficiently constant, these three operations amply furnish it. Others, too, who may have imagined, heretofore, that the galvanic cautery in surgical practice must necessarily be limited to small epitheliomatous or pedunculated tumors, fistulous openings, and birth-marks, will find for the first time how much wider its range of applicability may be extended.

That a highly vascular mass, fifteen inches in circumference, and situated within the pelvic cavity, has been successfully cut through and removed without loss of blood or subsequent inflammatory complications, is a circumstance in the history of galvano-cautery as suggestive as it is worthy of record.

The unfortunate occurrence that brought about a fatal issue in this case after the third operation, namely, exposure to cold, however deeply to be regretted, has nothing whatever to do with the merits of the operation, because up to the time of this accidental misfortune the patient was in a much better condition, and promised a more rapid recovery than at a like period after either of the two previous operations.

The report of an operation for the removal of an intra-uterine sessile fibroid (Case XIV.), exemplifies another and I believe a safer means than that of enucleation, by which the removal of these tumors may sometimes be effected.

Avulsion or enucleation of intra-uterine fibroids is admittedly a hazardous, and at best a most difficult undertaking, because, though encouraging results have occasionally attended the efforts of some surgeons in this direction, the operation is one from which those who are best qualified to appreciate its dangers and difficulties will be most apt to shrink.

I am not aware that any successful attempt has been heretofore made to sever the connection of such an intra-uterine growth as that described in my case, by means of the electric cautery; and though the proceedings therein adopted may be found impracticable in some instances, a persevering effort, when it is deemed possible, would, I think, in a conservative sense, be proper and advisable.

The interest that attaches to the case of fibrous polypus springing from the fundus uteri (Case XV.) is due more to the diagnostic lesson it conveys than to the means by which its removal was effected; because an error in diagnosis, regarding its real point of departure from the uterus, would in all probability have been fatal to the patient. When this tumor was exhibited at a meeting of the New York Obstetrical Society, two examples of this fatal error in cases precisely similar, were related,—one as having occurred in the clinic of Professor Scanzoni within the last two years, and the other in the practice of a prominent New York surgeon. In both cases the fundus uteri, being mistaken for the base of the pedicle, was extirpated, and the patients died in consequence.

Dr. Graily Hewitt,* referring to this subject, says: "When the polypus has a large basis of attachment, the fundus may be so drawn downwards that what appears to us the pedicle of the polypus is really the uterus itself. A specimen was not long ago exhibited at the Pathological Society, and referred to Dr. Marion Sims, Dr. John Ogle, and myself for examination, in which such a tumor had been excised, and a circular piece, comprising the fundus uteri, had been removed with it."

I have thought proper, also, to introduce another example of polypus (Case XVI.); the clinical features of which are no less peculiar and instructive than that last referred to. However, as certain inferences deducible from what was noticed in this case have been suggested elsewhere, and important principles, applicable to galvano-cautery, based on facts then observed, have been defined in aphorisms 3 and 4, no further remarks seem called for on the subject.

Case XVII. presents some interesting points for reflection, a few of which have already been glanced at in the report. I think this, as well as other similar cases met with, go far towards establishing a fact in the clinical history of such ailments, as well as certain principles applicable to their management, of great practical value.

Thus, however successful Dr. James Henry Bennet,

* Diseases of Women, first American from second London Edition, page 529.

and others who accept his pathology and therapeutics of inflammatory and congestive uterine diseases, may have been in "melting down" voluminous cervices by potassa cum calce and other corrosive substances, the most thorough, and by no means superficial, destruction of such parts by the electric cautery, and subsequent copious purulent discharges, cannot be relied on as a remedy for nutritive hypertrophy of the cervix uteri. Moreover, I feel justified in concluding, from my own observation, that amputation of the cervix by galvano-cautery, as compared with local depletion, caustics, and escharotics, offers the quickest, safest, most painless, and by far the most successful treatment for this very numerous class of cases. Whether the explanation already given in regard to the elevated position and immobility of the uterus noticed in this case, is the correct one, or likely to aid us in establishing some principle for our future guidance, will, of course, depend on further experience and the opinion of others.

This much, however, I may add: the circumstance, though probably noticed by others before, appeared so novel to me that I could not well avoid recording it, and the explanation and inferences are offered for what they may be deemed worth.*

In concluding this brief summary of my clinical experience in galvano-cautery I would simply remark that those who confine their appreciation of this invaluable agent in uterine surgery to its blood-saving properties, omit to take into consideration its most attractive and important attributes. These consist, first of all, in the peculiar manner in which this hæmostatic effect is produced on the vessels, and which I surmise is in no way analogous to that effected by ligature, torsion, ecrasement, or styptics. Secondly, as there are no disorganized blood-clots or other effete material to become absorbed into the circulation, blood-poisoning, as I have before observed, need not be apprehended as a sequel of cautery operations.

In other words, it would appear that not only are the blood-vessels securely sealed up, but the lymphatics as well, and hence the immunity from hæmatoxic and inflammatory complications.

NOTE.—In the first part of this paper I was induced to promise on behalf of instrument manufacturers, that certain defects in the construction of my speculum, of which I justly complained, would henceforward be remedied, and that the instrument would no longer continue to be made in defiance of every principle as explained in my original description of it. I regret to say now, however, that these promises and expectations have not been fulfilled. I have quite recently seen as worthless a specimen as it is possible to imagine exposed for sale in one establishment, and I am informed and believe that others equally useless are constantly being disposed of elsewhere.

Under these circumstances I cannot let this opportunity pass without warning the profession against the purchase of these imperfect instruments. *When the outside measurement of the anterior blade, transversely, exceeds one inch and a quarter, the speculum cannot be used without considerable pain to the patient, and, therefore, ought to be rejected.* As to those who have already purchased these instruments, their only remedy is to insist on being supplied with such as are perfect, both as to principle and workmanship.

314 Clinton street, Brooklyn, January, 1873.

DISLOCATED SHOULDER OF ONE HUNDRED AND THREE DAYS' STANDING REDUCED BY MANUAL POWER.

By B. F. SHERMAN, M.D.,

OGDENSBURG, N. Y.

On the 13th of August last, a lady called at my office, from whom I gleaned the following history. She was the wife of a farmer living thirty miles south of here; was *forty-five* years old, stout, and always healthy. On the 3d of May last she fell from the loft of the barn, and caught by the right hand, bringing the whole weight of the body upon the right arm. While hanging in that position she swung half round, and fell a few inches to the floor below.

On reaching the house, she was conscious of something wrong with the right shoulder. A physician was called, who pronounced the shoulder out of joint, and proceeded, with the assistance of the husband, to set it. After using a great amount of force, it was pronounced set and "all right;" but the patient had no use of the arm, and continued in pain. The physician called the second and third days; and on the fourth day a surgeon from a neighboring city was called in consultation, when it was again examined and pronounced "all right." At the end of two months (the patient having no use of the arm, and in constant pain) a third physician was called, who confirmed the previous diagnosis, that it was "all right." The daughter (an intelligent lady) confirmed this statement, and said her mother's shoulder looked then (the 13th of August) just as it did when she first saw it, the day after the accident. On examination, I found the head of the humerus in the axilla, and proposed to make the attempt to reduce it, although it was of *one hundred and three days' standing*. The patient assented to my proposition, but requested the presence of my brother, Dr. S. N. Sherman (to whom she had first applied, but whose health was too feeble to render any manual assistance). Calling in my brother, and my friend Dr. Z. B. Bridges, my diagnosis was confirmed, and proposition at reduction assented to by them. The patient was placed upon her back, on a broad, firm lounge of the height of a common chair; the half of a heavy, strong sheet was made fast by the clove-hitch to the right arm, just above the elbow, and the ends tied together, forming a loop. Chloroform was then administered until every muscle was relaxed. Passing the other half-sheet over my right shoulder and under the left, while seated in a chair by the side of the lounge, the ends were tied into the loop of the half on the patient's arm at such a length, that when my right heel was in the axilla I could bring into action all the muscles of the whole body except the left leg. When all was in readiness I took hold of the wrist with my right hand, and the arm, just above the elbow, with my left; my brother administering the chloroform and Dr. Bridges manipulating the head of the humerus with all his strength. I commenced a steady, firm, and powerful extension, at an angle of forty-five degrees with the body. At each increase of power the adhesions were felt to give till supposed to be sufficiently extended, when the arm was carried across the chest, making a fulcrum of my heel. This was repeated the second time without success, but the third trial was more fortunate,—the head slipped into the glenoid cavity, with no appreciable snap or jar, of course, as the cavity must have been well nigh filled up.

Suitable bandages were applied to keep the elbow close to the body, and to relieve the dragging weight upon the shoulder. After recovering from the chloroform (which she did very soon) she took a cup of tea, and 20 grs. of chloral (opium acting unkindly) gave her a good night's rest. Next morning she took the cars for home. Five weeks after, I saw her again; she was then able to move the arm in every direction, having little or no pain, and rapidly recovering the perfect use of it, though the deltoid was somewhat smaller than its fellow, from long disuse.

* There is a patient at present under treatment in St. Mary's Hospital for vesical and uterine prolapse, and whose future condition will serve to throw some light on these interesting points.

THE LARYNGOSCOPE AN AMERICAN INVENTION.

By G. TROUP MAXWELL, M.D.,

MIDDLETOWN, DELAWARE.

(Read before the Delaware State Medical Society, June 11, 1872, and published by request of the Society.)

MR. PRESIDENT AND GENTLEMEN: Your indulgence is asked, whilst, in this formal manner, I present for your consideration the grounds upon which I base my claims to whatever credit is due to the inventor of an instrument, which has signalized its efficiency by results so decided and brilliant as to have marked an epoch in the exploration of delicate and important organs, and the treatment of their diseases.

In this connection and at this point I may with propriety remark, that I do not undervalue the embarrassment arising from the disadvantage under which I must labor in an attempt to revive, or excite interest in, a subject which has been permitted to rest in abeyance for nearly twelve years; but I am sustained and flattered by the hope that I shall furnish reasons for this seeming neglect, which cannot fail to prove absolutely satisfactory and convincing to any unprejudiced mind. And I may properly remark, further, that whilst I shall aim and strive to put my own claims before the medical profession in as clear and strong a light as possible, I do not wish to seem even to desire to detract one iota from the applause so justly and so universally accorded to that renowned Hungarian whose name is indissolubly associated with the laryngoscope as its inventor. Indeed, I know that could a mean spirit of envy so possess and influence me as to engender a disposition to indulge in detraction, the noble instincts of a magnanimous profession would speedily administer condign rebuke. I would not, therefore, cast the slightest shadow upon his fair escutcheon if I could, and I am fully aware that I could not if I would. Indeed, I have not the purpose to institute a comparison even of our claims. Czermak's name, I repeat, must ever continue indissolubly connected with the laryngoscope, as its inventor. But whilst it is a living and abiding fact that to the distinguished Hungarian full credit is due, as against the world, for both originality of invention and priority of use of that invaluable instrument, I am here to prove, that close upon his heels, without one suggestion from any outside source, a humble American had worked out to a completely successful solution the self-same problem; and that, had Czermak never lived, or, living, had he never bestowed a thought upon the subject which his genius has so richly illuminated, the world would have had to wait but a few months for the priceless facilities for exploring and successfully treating the diseases of those delicate organs which the laryngoscope has furnished. I hope and expect to be able, by proofs which shall be forthcoming, to force the conviction on your minds that, almost at the same time that Czermak was conducting in Europe those experiments which culminated in his presenting to the world the perfect laryngoscope, I had, in the comparatively obscure capital of the State of Florida, invented a similar if not the same instrument, involving identical principles, and had, with eminent success, arrived at the same results.

If the data which I shall presently disclose to you are, as I think, sufficient to establish these statements as facts, then shall I expect to receive your endorsement of my claims.

Readily yielding to Czermak the palm for originality, and as against all competitors for *priority* in the successful employment of the laryngoscope, for the practical and useful purposes to which it is now daily applied, I shall urge my own claims to this extent only, that in utter ignorance of the labors of any one in this field of operation, and wholly independently of suggestions from any source, I designed and had an instrument made by Tiemann & Co., of New York, surgical instrument-makers, which was constructed upon principles so correct, and upon a pattern so well adapted to the purpose intended, that I had no difficulty in bringing into view the entire pharynx and larynx—I shall establish that my invention was a complete success and purely original, and that with the instrument of my invention I have seen the entire epiglottis, the glottis, vocal cords, and larynx in a living subject before any one on this continent—indeed, before any one in America knew of Czermak's experiments, and even before his successful results had been published in Europe.

In the fall of 1858 I left my home in Tallahassee, Florida, to visit New York, the medical metropolis, as it is the commercial emporium of the United States, for the twofold purpose of recreation and of studying the improvements and novelties in medicine which had been developed in the decade immediately following my graduation, then just closed. Desiring to devote special attention to the diseases of the respiratory organs, I naturally sought and made the acquaintance of Dr. Horace Green, who, beyond question, stood pre-eminent in that specialty in his day. To that distinguished gentleman I was placed under obligations, not only for the unusual facilities which his extensive practice afforded of seeing large numbers and an almost endless variety of cases, and the principles of treatment illustrated by his transcendent skill, but for marked courtesy of personal intercourse. Whilst visiting his office and watching the progress of cases under treatment, almost daily for several months, I was particularly struck with the frequency with which cases in which the organs of the pharynx and larynx, just out of sight, presented themselves. In such cases the utmost care was required in forming a diagnosis; and as deductions could only be formed inferentially from the signs and symptoms, and as the movements of the diseases towards a successful or unsuccessful result were also necessarily left to inference, the difficulties in the way of making a correct diagnosis, and of meeting changes in the cases with suitable modifications of treatment, were discouraging enough, to one of less skill and experience than Dr. Green. Impressed, then, with the great importance of removing that uncertainty of diagnosis and the embarrassment in treatment, I returned to my home and resumed practice, to very soon experience the magnitude of the difficulties.

Amongst the cases of interest which came under my care very soon after, was that of Mr. (now Col.) Geo. W. Scott, a native of Pennsylvania, then a resident of Tallahassee, and now a prominent merchant of Savannah, Ga. Having, as he supposed, either an inherited or an acquired tendency to phthisis, he had, several years before, sought the advantages of the genial climate of Florida, residing first in Quincy, and subsequently in Tallahassee. Although much improved in his general health by the change of climate, Col. Scott was the subject of an almost constant irritation of the throat, pharynx and larynx being both involved. In the beginning of 1859 he put himself under my care, and from the start I was oppressed by the difficulty of making an accurate or satisfactory diagnosis of his

disease, and of adopting a system of treatment which would satisfy my own mind. More and more the great advantage to be derived from *ocular* inspection of the diseased organs forced itself upon my consideration, until at last, during the latter part of the summer of that year, I had not only conceived the idea, but had devised the form, of a mirror to reflect those organs. My plan was to construct a mirror about an inch in length and three-fourths of an inch in width, elliptical in form, upon a suitable handle, which, being placed in proper position, would reflect perfectly the lower part of the pharynx and the upper portions of the larynx. Not being possessed of a large share of mechanical ingenuity, I was delayed some time in devising a handle that would give the desired angle, or one that would be adjustable; and the great distance from an instrument-maker rendered the idea of clearly defining objections to one which after it was made was found not to suit, and the difficulty of sending to and fro, absolutely impracticable. I therefore fell upon the idea of having my mirror to rest upon a short stem one-third of an inch long, terminating in a screw that would fit into the barrel upon the handle of Sims' uterine elevator. Feeling assured that the idea was practical, I then made a model of the mirror and forwarded it to Messrs. Tiemann & Co., directing one to be made, and telling them what I intended it for. In the early part of November, 1859, I received the instrument, and immediately applied it to investigating Col. Scott's case. In the first experiments I was embarrassed by the mist which condensed upon the face of the mirror, but that difficulty was removed by warming the mirror by holding it near the flame of a lamp. I was fortunate in commencing upon a subject whose throat was thoroughly educated to tolerate the contact of foreign substances by previous treatment with the probang; consequently I was spared the embarrassment, so often encountered by laryngoscopists, arising from so great sensitiveness of the fauces to the touch of instruments as to interdict the use of the laryngoscope, until the parts have been educated to toleration. Under the favorable circumstances described, I was not long waiting to see my fondest hopes crowned with complete success; for in my mirror were reflected perfectly the whole of the posterior face of the epiglottis, the glottis with the vocal cords, etc. It is but simple candor to confess, however, that I did not fully appreciate the importance and magnitude of my achievement until I read, the next year, the almost unbounded encomiums passed upon Czermak for the same results which had previously been accomplished by him.

I neglected to say, in the proper connection, that my mirror was made of steel, highly polished, and that I had one side made concave, hoping that it would in some way intensify the light and illuminate the dark passage. In this expectation I was of course disappointed.

My examinations of Col. Scott's throat were frequently repeated: I was thus assured in my diagnosis, and enabled to conduct the local treatment to a successful issue.

At that time and until July, 1860, I had never read nor heard of the experiments of any one in this direction, and, as I have already declared, I was not aided by the slightest hint or suggestion from any source. Living in a remote country village, without the advantage of public or large private libraries, I did not enjoy access to any writings which in any manner referred to the subject. I have since informed myself of the experiments of Liston, Garcia, and others who preceded Czermak; but at the time my experiments were conducted and my instruments perfected, I was totally ignorant of their experience. At that time Czermak's invention had not been made public in Europe even. His first public announcement was made in Paris in April, 1860, fully four months after my instrument was made. An account of his successful invention was not published in this country until July, 1860—then simultaneously in the *New Orleans Medical and Surgical Journal* and in the *American Medical Monthly*, New York, four months later. It will be seen, then, that it was impossible for me to have derived the slightest intimation of his movements from any source. And as "to Czermak is undoubtedly due," in the language of Prof. Gross, "the credit of being the first to employ such an instrument upon scientific principles, although a similar idea had occurred to Babington, Baumès, Liston, Garcia, and others," my purpose will have been achieved if I have shown satisfactorily and conclusively, as I think I have done, that my experiments were made wholly independently of his; indeed, that it was, in the nature of the case, impossible for me or any one else in this country to have known that he was engaged in experiments with the *laryngoscope*. This conclusion must be reached, when the fact is recalled that my instrument was made for me by Tiemann & Co. fully four months before any publication of Czermak's labors and their results was made in Europe, and not until four months later were the facts given to the public on this continent through our medical journals.

From these data it will be seen that my invention, although made subsequently to Czermak's, was as thoroughly original as his; and, further, that to me belongs the honor of having first, of all men on this continent, beheld reflected in a laryngoscope those delicate and important organs composing the pharynx and larynx—an honor vastly increased by the consideration that the instrument by which they were brought into view was of my own invention.

And now for the explanation of my long delay in bringing my claims before the public. My experiments, as I have shown, were begun in the summer of 1859, and were continued through the winter following. Besides the fact that I did not then appreciate the full value of my achievements, which encouraged a natural disposition to procrastinate, in the spring of 1860 I was honored by election to the Chair of Obstetrics, etc., in Oglethorpe Medical College, Savannah, Ga.; and beginning my preparations to move to that city, was engrossed in that business, and fitting myself for the arduous duties of the, to me, novel station, until the fall of 1860. Meanwhile my ardor in the matter was considerably cooled by the discovery that my invention had been anticipated by Czermak. Throughout the winter of 1860–61 my duties as teacher consumed my whole time, and the day that the college session terminated I gave up my profession and entered the army of the Southern Confederacy. There I continued until the conclusion of the war in 1865.

Upon resuming my professional functions, which had been suspended for four years, I discovered that amongst other losses I must count my little mirror, and, besides, all the correspondence and other data by which to establish the facts I have just been presenting to you. As soon as I had again begun to practise my profession I took steps to replace those evidences of my claims to being an inventor. I wrote repeatedly to Messrs. Tiemann & Co., and also, through the intervention of friends, sought to obtain from that house a transcript from their books of the dates and other items connected with the manufacture of the mirror. All my efforts were unavailing, however, until I made the acquaintance in March, 1872, of Dr. Bradford S. Thompson, of New York, who was then on a visit to Middletown.

in this State. Upon hearing the story of my disappointment his interest was enlisted in my behalf, and by the aid of his indomitable industry and persistence I was finally successful. As late as the 14th of last March Messrs. Tiemann & Co., instigated thereto by Dr. Thompson's interposition, wrote that they had not succeeded in finding any reference to the subject in their books; but in a letter of the 20th of March they stated that they had at last found the original entry, a copy of which they inclosed to me. That entry contains a charge against me "for one concave and plain steel mirror, made to fit Sims' uterine elevator," and is dated "October 26, 1859." By this evidence the date of the manufacture of my mirror is fixed beyond dispute, and this was procured after repeated efforts throughout seven years.

My purpose was immediately formed to bring the subject before the American Medical Association, at its session in Philadelphia in last May. I visited that city at that time, and obtained permission of the Association to present the matter to the Section on Surgery; but the Section was so overcrowded with business furnished by delegates that I could not obtain a hearing.

In conclusion, you will permit me to say that I hope I have succeeded in establishing all that I undertook to prove: 1st, My originality as an inventor; 2d, my priority in the successful employment of the laryngoscope on this continent; 3d, and finally, that I have used all possible diligence, though without success, to bring the subject before the public earlier. My delay has been the result of misfortune rather than of neglect. And now it only remains for me to thank you, gentlemen, for the patient and interested attention which you have given to me.

A CASE OF EXOPHTHALMUS, WITH MARKED DISTURBANCE OF THE RETINAL CIRCULATION.

By CHARLES S. BULL, M.D.,

ASSISTANT SURGEON TO THE MANHATTAN EYE AND EAR HOSPITAL, NEW YORK.

THE following case is of interest, from the fact that it was impossible to detect any cause for the affection, and that it remained uncomplicated throughout its entire course.

R. Q., aged 24, single, a native of Ireland, and by trade a watchmaker, presented himself at the Manhattan Eye and Ear Hospital on July 5th, 1872, with the following story: The patient stated that he had never had a sick day in his life, and had never had any venereal disease except an attack of gonorrhœa, several years since. About three months previous to his appearance at the hospital, he noticed that the left eye-ball commenced to protrude, and the prominence increased in degree steadily up to date of admission. The patient complained of no pain nor of any dimness of vision, and there were absolutely no subjective symptoms, except a feeling as if the eyes were steadily forcing their way out of the orbits. The objective symptoms were somewhat marked; the left eye-ball protruded very nearly half an inch beyond the superior orbital margin, in the horizontal plane, and did not vary a hair's-breadth from a line drawn perpendicular to the vertex of the cornea. There was a slight ptosis of the upper lid, the ocular conjunctiva was deeply injected, the vessels being larger towards the retro-tarsal fold, and on everting the lids the palpebral conjunctiva was found very much congested. There was profuse lachrymation on exposure to a bright light, but no photophobia. The cornea was perfectly normal, as was also the iris, and there was no ciliary injection. The pupil reacted promptly to the stimulus of light. Over the course of the external rectus muscle, from its insertion as far back into the orbit as it could be followed, ran a broad leash of large, tortuous vessels lying beneath the conjunctiva, but which could be moved over the muscle itself and which, on pressure being removed from them, filled again from the end towards the cornea. There was but little limitation of the excursive movements of the globe, and chiefly in rotation outwards. Vision was $\frac{20}{xx}$ for the distance, and the patient read Jaeger No. 1. with normal range of accommodation. Atropine was instilled, and on examination the media were found absolutely clear. There was a slight central physiological excavation of the optic disk, the refraction of the fundus being hypermetropic $\frac{1}{4}$. The outline of the papilla was somewhat indistinct, and there was very unusual development of the retinal and optic vessels. All the branches of the central artery and vein of the retina were very large and tortuous, and in the ascending and descending branches of the vein was the most marked pulsation I ever saw, which was propagated into the larger subdivisions, and in one ascending branch it could be followed almost to the equator. As the central artery bifurcated, the ascending branch passed over the ascending branch of the vein, and such a strong bounding movement was given to it by the pulsation of the subjacent vein, that for some moments I thought the artery itself pulsated. Beyond this, there was nothing abnormal to be seen in the fundus.

By pressing upon the eye-ball directly backward, it could be forced into the orbit, but occasioned great dizziness to the patient, and once a feeling of faintness. The heart was carefully examined and found perfectly normal. There was no irregularity of the pulse at the wrist, the number of beats in the minute being 82. There was no enlargement of the thyroid gland, and the patient was apparently in perfect health.

The patient was placed upon the use of potass. iodid., commencing with grs. x. *ter die*, and was directed to increase each dose by one grain every day, so as to make the daily increase three grains.

July 29th. Almost all the external conjunctival congestion has disappeared, and the eye-ball is a trifle less prominent, but the retinal vessels are still very much enlarged and tortuous, and the pulsation is as marked as ever. The *right* eye has commenced to protrude somewhat and the retinal vessels are here tortuous and swollen, and there is a venous pulsation in both branches of the central vein, though less marked than in the *left* eye. The potash was continued in grs. xxx. doses, and a leech was ordered to be applied to each temple.

August 5th. In the *left* eye the congested appearance of the papilla and choroid has diminished considerably, but there is still a slight venous pulsation in the main ascending branch of the retinal vein. In the right eye the congestion of the whole fundus is still very marked, but there is no venous pulsation visible. The potass. iodid. was continued, and the patient was advised to take two grains of the sulphate of quinine three times a day.

August 7th. In the *right* eye the injection of the ocular conjunctiva is still very marked, the eye-ball has become more prominent, and a pulsation is now visible in the descending branch of the central retinal vein. In the *left* eye the prominence is somewhat less, and though the veins are still very much engorged, the pulsation has disappeared.

August 12th. The injection of the ocular conjunctiva is still very marked in both eyes, the prominence of the globes is more evident, and the excursive movements inwards and outwards are more restricted. The condition of the fundus of the *right* eye remains about the same; but in the *left* eye the signs of congestion are very much increased, the ascending vein pulsating with great force, and in addition there is a very marked pulsation of the left external jugular vein, which had never been noticed before.

August 14th. The exophthalmus is still more prominent, but the conjunctival injection has diminished. The fundus remains the same.

August 23d. In the *left* eye the sub-conjunctival vessels, coming from the long posterior ciliary vessels, are very much enlarged and distorted over the course of the external rectus muscle. The condition of the fundus remains the same in both eyes as at last date.

August 30th. The prominence of the *right* eye is much less. The engorgement of the deep vessels over the external recti of both eyes is less marked. In fixation for the distance there is a perceptible divergence of the optic axes. The iodide of potassium was now discontinued, and tinct. digitalis, in doses of five minims three times daily, was administered. The venous pulsation in the *left* eye is confined to the ascending branch of the vein, but it is so marked as to be traced for a long distance beyond the border of the disk. There is still a venous pulsation in the *right* eye, but it is much less marked. It is thus seen that the condition of things has remained about the same since its commencement, with no improvement, and no materially unfavorable progress, and the cause remains still unknown to me.

No. 7 West Forty-sixth street.

REPORT OF EIGHTEEN OPERATIONS FOR LITHOMY, AND TWO CASES OF HERNIA.

By HENRY S. WEST, M.D.,

MISSIONARY PHYSICIAN AT SIVAS, TURKEY IN ASIA.

THESE have occurred since my communication in your journal of July 15, 1871, making the whole number reported one hundred and six.

Of these eighteen cases, ten patients were aged from three to ten, and the remaining eight, from twelve to twenty-eight.

Fourteen operations were lateral and four median. They were all cases of a single stone, but two, in one of which there were three stones, and in the other, two.

Eight stones were urates, four oxalic, seven phosphatic, one oxalolithic, and the other oxalo-phosphatic.

All but two weighed less than an ounce. Of these one weighed nine and a half drachms and the other forty-two.

All the patients recovered, or are recovering, but the case from whom this largest stone was taken. He was aged twenty-eight. For two or three years he had been mostly confined to the bed. Could not assume the erect posture, but stooped much when moving about the room. I was obliged to divide both the lateral lobes of the prostate and make a large external wound. Stone was removed without much delay. Patient bore the operation well, and for the first few days seemed in a fair way to recovery. No inflammatory or infiltrative symptoms. Afterwards he began to droop and the wound inclined to slough, involving also some hemorrhoidal tumors. He was removed from Sivas a week after the operation, in a feeble state, from which he did not recuperate.

Stone oxalic mostly, with two protuberances of evidently more recent deposits, apparently phosphatic.

Of the other cases I have nothing special to remark. One or two of those of longest standing suffered with symptoms of cystitis which yielded to the free use of morphine. The phosphatic concretions, some of them crushed under the forceps and could have been readily removed by lithotrity, if the patients had been of suitable age. Syringing thoroughly removed all débris.

Two cases of strangulated hernia I also report because they exemplify how the amount of intestine involved may modify the usual rule of prognosis founded upon the duration of strangulation.

The first case I saw August 6, 1871. The patient was a Turk, aged about twenty, who had been for several years the subject of a right inguinal hernia. Notes state:

"Nine days ago, in violent straining to lift suddenly a heavy load, the tumor was much increased, with all the symptoms of strangulation. Some days after, rude efforts were made at reduction and a pad and binder applied. There has been no fæcal evacuation since the accident. For several days stercoraceous vomiting. Abdomen quite tumid. Tumor very sensitive to the touch. Occasional paroxysms of severe colic. Pulse eighty (80), and full. Tumor of about the size of a pullet's egg, evidently entero-epiplocele. Made thorough efforts at reduction to no effect. Patient was unwilling to have me resort to the knife.

7th. This evening, again called, and after another effort at taxis, was requested to operate, which I was obliged to do by the flickering light of a pine torch. On opening the sac I found a mass of inflamed and adherent omentum, a considerable portion of which was nearly disorganized. This I dissected away, but did not attempt a complete dissection all around, which would have been tedious and useless. A small coil of intestine was thus completely surrounded, and the case, whatever it may have been at first, was now one of irreducible hernia. I divided the strictures freely, both aponeurotic fibres and the neck of the sac. Four arteries required ligature. Closed the wound with sutures, keeping a point at the lower end open with a tent. Patient comfortable. Pulse eighty and full. Gave calomel and morphia.

8th. No pain or vomiting. Takes milk and broth with relish. No relief of constipation. Gave an enema which was not retained. Afterwards gave castor oil, but it was vomited.

Evening. Pain in tumor and abdomen. Pulse one hundred. Gave calomel and morphia.

9th. Again pain and vomiting. Pulse one hundred. Continue calomel and morphia, and ordered another enema.

Evening. Enema brought some fæcal discharge. Vomiting ceased. Tongue clean. Some appetite. Pulse eighty-five (85). Still abdomen tumid and inguinal region sensitive. Dressed the wound, which looks well. Ordered cataplasms to the abdomen and tumor, to repeat the powders, and to take another enema.

10th. Enema not retained. Had not taken the powders. Return of pain and vomiting. Repeated enema, which brought a small amount of fæcal matter.

Evening. Much pain and jactitation. Strength failing. No appetite. Disposed to vomit. Pulse eighty-four (84). Repeated enema. Lotion of acetate of lead and opium to the wound.

Later. Enema had done no good. Patient takes no food. Pulse eighty-eight (88). To repeat the powder.

11th. Has had copious fæcal evacuations. Abdo-

men natural, soft. Pain and tenderness gone. Patient begging for food.

14th. Patient doing well. Pulse sixty-eight (68). Removed the sutures and considerable slough from the wound. Ordered frequent cleansing and detergent and antiseptic applications."

This patient recovered without further trouble.

I quote from the notes of the second:

"January 25, 1872, 8 A.M.—Called to see a Turk, aged forty-five, who has been for several years the subject of a left scrotal hernia. Has never worn a truss. Yesterday afternoon, while shovelling, felt something give way, as he expressed it, with an immediate enlargement and strangulation of the hernia.

Tumor very large, nearly obliterating the penis, and exceedingly hard, but percussion giving the tympanitic sound of a distended enterocele. Constipation, nausea, etc. Pulse rapid and feeble. Taxis produced no impression, save a little gurgling sound in the tumor.

Patient entreated for an operation, but he was evidently sinking. I gave morphia, which was not retained. He died at 9.30 A.M., within twenty hours of occurrence of strangulation."

The former case recovered after an operation on the tenth day, and an obstruction continuing fourteen.

The result of these cases was not what would be expected from the perusal of the statistical tables of Mr. Gray and others. The principal elements of difference seemed to be in the amount of intestine involved, and very likely the region also. No autopsies can be obtained in this country, so our pathology can only be read through symptoms.

Twelve years ago, an aged woman, on whom I operated for strangulated femoral hernia, on the sixth day recovered. A small portion of intestine was involved, but this was so nearly gangrenous that some days after the operation, some fæcal discharge commenced from the wound, which continued several days.

Sivas, August 27, 1872.

Progress of Medical Science.

Eucalyptus Globulus.—Dr. Wooster, M.D., of San Francisco, California (*Pacific Medical and Surgical Journal*), submits a report of 135 cases of various diseases treated exclusively with fluid extract of eucalyptus globulus. This preparation was made by Dr. Coleman, Resident Physician at the United States Marine Hospital.

Remittent fever: cases treated, 5; cured, 5. Intermittent fever, cases treated, 19; cured, 19. Typhoid fever: cases treated, 9; cured, 9. Nephritis: cases treated, 4; cured, 3; improved, 1. Duresis, cases treated, 10; cured, 7; improved, 3. Incontinence of urine: cases treated, 3; cured, 3. Vesical catarrh: cases treated, 27; cured, 25; improved, 2. Blennorrhagia: cases treated, 13; cured, 10; improved, 3. Valvular disease of heart: cases treated, 7; cured, 0; improved, 7. Dysentery: cases treated, 4; cured 3; improved, 1. Chronic diarrhœa: cases treated, 13; cured, 9; improved, 4. Gonorrhœa (syphilitic): cases treated, 15; cured, 10; improved, 5. Dropsy: cases treated, 6; cured, 3; improved, 3. Of the whole number of cases, 106 were cured and 29 improved.

At a recent meeting of the San Francisco Medical Society, Dr. Stout exhibited an ingenious apparatus for the inhalation of medicated vapors. The medicated liquid is kept boiling by a spirit-lamp and the vapor conducted through a tube. He had used the *eucalyptus* in this way, employing the tincture in water. It was preferable to the common atomizer, because of the warm vapor, which is not only medicinal in itself, but promotive of absorption. The eucalyptus he had found very beneficial in bronchial and pulmonic affections. Dr. Stout also distributed some cigarritos made by enclosing the powder of the leaves in a roll of paper, which were puffed by the members.

Dr. Pigné-Dupuytren testified to the virtues of the remedy, which had been fully tested by himself and Dr. D. Oliveira, in the French Hospital. It had been found highly serviceable in affections of the larynx and of mucous membrane in general; also as a tonic. In France it was much used as a febrifuge, and by some considered a substitute for cinchona. The leaves growing near the trunk of the tree were the most aromatic. A large number of the trees had been planted around the French Hospital, for sanitary and medicinal purposes. The leaves, in drying, emitted a large amount of balsamic exhalations, capable of causing headache in persons much exposed to them, as he had experienced in his own house.

Idiocy and Congenital Syphilis.—In a clinical lecture "On Inherited Syphilis," by John S. Parry, M.D., physician to the Philadelphia Hospital (*Philadelphia Medical Times*, September 2, 1872), the suspicion of a relation between idiocy and congenital syphilis is spoken of; that in a given number of syphilitic infants a larger proportion of them will be defective in mental development, than among the same number of children not so diseased. He would not be willing to express a positive opinion upon this subject without having had further opportunities to investigate it. He thinks, however, that the matter would repay examination. Two cases of idiocy combined with congenital syphilis, the patients being boys, aged six and a half and eight and a half years, were exhibited to the class.

Styptics.—In an inaugural essay, Dr. Charles H. Mitchell (*American Journal of Pharmacy*, June, 1872) presents the subjoined new formulæ: *Styptic Collodion.* R. Tannin, ℥ij.; Stronger Alcohol, f℥iv.; Stronger Ether, f℥xij.; Soluble Cotton, ʒj.; ℈ij.; Canada Balsam ʒj. Introduce the cotton into a suitable bottle, pour on it two fluid ounces of alcohol, shake well; then, add ten fluid ounces of the ether, agitate frequently until dissolved. Dissolve the tannic acid in a mixture of the remainder of the alcohol and ether, mix with the first liquid, add the balsam, allow to stand until clear: then pour off.

Collodion with Sesquichloride of Iron.—R. Sesquichloride of Iron, ʒj.; grs. 10; Stronger Alcohol, f℥10; Stronger Ether, f℥xij.; Soluble Cotton, ʒj.; grs. 10. Into a suitable bottle introduce the cotton, pour on two fluid ounces of the alcohol, and shake well then add the ether, and agitate frequently until dissolved. Dissolve the sesquichloride of iron in the balance of the alcohol, mix with the prepared collodion.

Eucalyptol.—According to the *Pacific Medical and Surgical Journal* for August, 1872, a volatile oil has been produced from the leaves of the eucalyptus, to which the name *Eucalyptol* is given. The vapor of eucalyptol, when breathed in a concentrated form, will produce symptoms of intoxication. In anæmic persons the oil produces sleep, in doses of fifteen to thirty grains.

Dactylitis Syphilitica.—John S. Parry, M.D., accoucheur to Philadelphia Hospital (Philadelphia *Medical*

Times, September 16, 1872), in a clinical lecture on "Inherited Syphilis," directed attention to the appearance of the fingers of a colored girl, aged eleven years, illustrating the uncommon lesion known as *dactylitis syphilitica*, which occurs in the later stages of both the inherited and the acquired disease. He remarked that the first description of this curious condition was written by Chassaignac, in 1859; but the most elaborate account of it was published by Dr. R. W. Taylor, of New York, in the *American Journal of Syphilography and Dermatology*, for June, 1871. Previously, only five cases of the disease had been fully described. To this number Dr. Taylor added two others. Since then, Dr. Smith, of Ohio, and Dr. Wigglesworth, of Boston, have each reported a case. Mr. Morgan, of Dublin, in his late work on "Practical Lessons in the Nature and Treatment of Contagious Diseases," describes the affection, and mentions having met with three cases of it.

Complete Compression in Aneurism.—R. J. Levis, M.D., Surgeon to the Pennsylvania Hospital (*Philadelphia Medical Times*, September 16, 1872), gives a report of the successful application of complete compression to a case of aneurism of the external iliac artery. Total arrest of circulation was effected, and continued during profound anæsthesia by ether, for five hours and a half. The instrument used was made by Mr. Gemrig, and consisted of a hollow pad for counter-pressure on the buttock, a rigid steel band for partially surrounding the pelvis, with a small convex pad and screw, adjustable in a slot in front of the encircling band. From consideration of this case, he offers the following propositions: 1st. That aneurism of the external iliac artery may be amenable to treatment by complete compression of the vessel in a brief period. 2d. That total arrest of pulsation can be effectually made by mechanical means. 3d. That compression of the external iliac at the cardiac extremity of the aneurism, probably even where aneurismal dilatation exists at the seat of pressure, and without the aid of aortic compression, may be sufficient for the cure. 4th. That anæsthesia is essential to such treatment, and that prolonged etherization does not prevent coagulation of the blood. 5th. That pulsation may not cease entirely for some days, even when a coagulum has been fully formed. 6th. That reduction in size of the aneurismal tumor, by shrinking of the clot, is more rapid and complete when cured by total compression than when the cure is effected by slow deposit of fibrinous lamina in the gradual or partial compression. 7th. That the treatment of aneurism of the external iliac by the method of complete compression is the safest and most reliable, and should be generally adopted.

A Local Anæsthetic.—J. Knox Hodge, M.D. (*Geo. Med. Companion*, August, 1872), recommends the following formula as a local agent of signal potency in all neuralgic affections, and for the relief of pain generally: ℞. Albumen of Egg, ʒj.; Rhigolene, ʒiv.; Oil of Peppermint, ʒij.; Collodion, Chloroform, āā ʒj. M. Agitate occasionally. Apply by smart friction with the hand, or gently with a camel's-hair pencil along the course of the nerve involved.

Cirrhosis and Albuminuria.—In a case of coexistence of albuminuria and cirrhosis, published in the *Chicago Medical Examiner*, of Oct. 1, '72, by Dr. N. G. Davis, the following prescriptions were directed, to counteract the increase of dropsical effusions by increasing the action of the skin and kidneys, and to sustain the strength and nutrition of the patient: ℞. Tinct. Digitalis, ʒij.; Fl. Ext. Lactuca. ʒij.; Syrup Prunus Virg., ʒij.; Iodid. Potass., ʒiij. M. Take one teaspoonful every six hours, ℞. Spts. Nit. Dulc. ʒiij.; Tinct. Ferri Chlorid., ʒj. M. Take one teaspoonful every six hours, alternating it with the other prescription.

Perinæorraphy.—W. Duncan, M.D., Savannah, Ga. (*Jour. Gynæcological Society*, Sept. 72), communicates a case of perinæorraphy with successful result, the patient being a colored woman, 28 years old, robust and healthy in appearance. The principal feature of interest in this case was the complete and perfect union of the parts throughout the whole extent of surface, vivified without any fistulous communication whatever, notwithstanding a persistent diarrhœa of several days' duration.

Living Cells.—S. H. Chapman, M.D., of New York (*Am. Jour. Med. Sciences*, Oct. 1872), remarks in his "Researches on Pericarditis," that it is the theory of Strieker and his pupils that all living cells are reliable, under the influence of inflammation, to divide and multiply into pus cells or embryonal cells; that these embryonal cells are capable of fully developed growth, forming anew all the elements of a tissue; but that, as in the production of species, only a small fraction of the embryos grows to full development, so here the great mass of embryonal cells is wasted as pus, while the small remnant alone attains a new and full growth.

Treatment of Asthma.—Edgar Holden, M.D., of Newark, N. J. (*Am. Jour. Med. Sciences*, Oct. 1872), records seven cases of asthma completely cured by the inhalation of the protoxide of nitrogen. The gas, fresh and pure, is passed through a jar containing a fluid extract of conium, Calabar bean, or belladonna, according to the necessities of the case, and from this jar is inhaled by the patient, once daily, before retiring, and for four or five consecutive days, the quantity varying according to the condition of the patient, but not exceeding five to eight gallons—never to anæsthesia—the sitting occupying at least ten minutes. Relief almost always follows the first inhalation, and, with one or two exceptions, thus far the first inhalation has produced an uninterrupted night's rest. Upon the disappearance of the nightly paroxysm and the subsidence of all oppression in breathing, the remedy may be discontinued; but must be instantly resorted to upon the first evidence of return.

Treatment of Intracranial Aneurisms.—Dr. Roberts Bartholow, of Cincinnati, Ohio (*Am. Jour. Med. Sciences*, Oct. 1872), remarks that the remedial management of intracranial aneurisms is not an entirely hopeless undertaking. Ligation of the internal carotid artery offers a reasonable expectation of success in the case of aneurism of that portion of the artery in the carotid canal. Ergotin, according to Hildebrandt, may cause absorption of uterine fibroids by its action on the vessels, and it is believed it may accomplish good results in intracranial aneurism. The solution employed by Langenbeck was as follows: ℞—Ergotini, gr. ij.; spts. vini rect., glycerini puræ, āā ʒss. Five minims contain ¼th of a grain. At the same time that ergotin is being used hypodermically, the iodide of potassium, in doses of from ℈j. to ℈ij. or more, three times a day, may be employed internally. Besides these two remedies, the galvanic current may be employed for the relief of the neuralgia of the fifth, which so frequently attends aneurism of the vessels at the base. A downward stable current, from six elements of Siemens and Halske, gave great relief.

In regard to his personal experiences, in the way of treatment, he says that in one case in which the character of the symptoms indicated an intracranial neo-

plasm, most probably aneurismal, he succeeded in procuring marked amelioration, and it may be cured by a persevering use of large doses of iodide of potassium, and the galvanic current. He has not reported this with the other cases, because there must ever remain a great degree of uncertainty in regard to the existence of an intracranial aneurism, the actuality of which has not been demonstrated by *post-mortem* examination.

Oxytoxic Action of Quinine.—R. H. Rutland, M.D, of Las Animas, Colorado (*Am. Jour. Med. Sciences*, Oct. 1872), has for eighteen years prescribed quinia in large doses, regardless of the pregnant condition of the patient, and has never seen any unfavorable result. Indeed, in treating a patient suffering from malarial fever, and threatened abortion, he esteems quinia the safest remedy for averting it; not because it possesses any special power to procure uterine quiescence, but because it would break up the morbid excitement upon which the uterine activity most probably depended. That quinia has no special oxytoxic properties in cases in which it is indicated, he is as well satisfied as of any therapeutic fact.

Cerebro-Spinal Meningitis.—R. I. Wilcox, M.D., of Algonac, Mich. (*Detroit Review of Medicine and Pharmacy*, Oct., '72), publishes five cases of cerebro-spinal meningitis, with complications. Judging from the congestive type the disease assumes, and from the intermittent character at the onset in many of the cases, and from the marked success of the treatment by calomel and quinine, he is induced to regard it as a disease dependent on malarious origin. The treatment having been adopted on the idea of the malarious origin of the fever, and proving quite efficacious, was followed out in all the cases with equal success.

The Electric Bath.—Alexander Murray, M.D. (*N. Y. Med. Journal*, Oct., '72), states from his experience and personal use of the electric bath during the last five years, he finds it a pleasant, invigorating, and useful adjunct in the treatment of diseases. He speaks with confidence and without speculation as to the beneficial effects in all forms of rheumatism and allied diseases, hysteria, chorea, paralysis, amenorrhœa, diseases of the bladder, cholera-morbus, cholera-infantum, and wasting diseases of children, etc. The length of time to remain in the bath should range from ten to twenty-five minutes. For children, five to ten minutes will be sufficient. (Children are so delighted with its pleasant, exhilarating sensations that it is difficult to get them to leave the bath.) The best time to take the bath is between breakfast and dinner, or a short time before retiring to bed. It may be taken at any time when a person may not feel in his usual health, or during the prevalence of an epidemic or any unusual electrical state of the atmosphere, but never when the stomach is full of food. There need be no apprehension of catching cold after taking the bath by going out directly in the cold air. In using the galvanic current, and to avoid giddiness and other unpleasant sensations, the positive pole should be placed at the feet, and the negative at the head. To apply electricity to a patient while in the bath, the quantity of the water in the bath-tub should be reduced, so that the upper surface of the body would be uncovered of water; then let the physician cover the body with a large towel well wet with the water of the bath, and commence the application of electricity at the head downward, over any part or parts of the body desired, by means of a large sponge-covered electrode connected with the positive pole of the battery. The patient should at the same time keep one or both feet pressed firmly against the metal plate at the foot of the tub.

Gastritis.—In a clinical lecture on "Gastritis" by Prof. N. S. Davis, of Chicago, Ill. (*Med. Examiner*, Sept. 15, '72), he says that one of the best items of nourishment is a mixture of three parts of sweet milk and one of lime-water. At first it should be given in doses of one or two table-spoonfuls, and repeated every hour. The lime-water neutralizes the excess of acid in the secretions of the stomach, and aid in preventing the coagulation of the casein of the milk until it is absorbed. Once or twice a day a small quantity of thin porridge, made of milk and wheat-flour, may be given in addition to the other. Also, occasionally a table-spoonful of animal broth may be allowed. For the first three or four days the following prescription is beneficial: R. Sub. nit. bismuth 40 grs., pulv. ipecac four grs., hydrarg. chlorid. mite, four grs., pulv. Doveri 20 grs. Mix, divide into eight powders, and take one before each meal-time and at bed-time. After three or four days the powder may be superseded by a pill containing one grain of extract of hyoscyamus and one-third of a grain of nitrate of silver. In some cases a pill composed of one grain each of extract of hyoscyamus and sulphate of iron, taken just before each meal, produces a very beneficial effect.

Operation for Coloring Corneal Opacities.—R. J. Levis, M.D., Surg. to Wills' Ophthalmic Hosp'l (*Phila. Med. Times*, Oct. 5, '72), after some experience, finds that the most convenient and effective instrument for coloring corneal opacities is made by binding together, with a thread, from three to six very fine sewing needles, for use in accordance with the size of the blemish to be removed. The points of the needles may be made to project equally by holding them perpendicularly on a hard surface before the binding is tightly applied. By inserting the little bundle of needles into a handle, as that of a cataract-needle, or into a hole drilled in the end of a stick of similar form, the instrument is rendered complete.

The great essential coloring-material is a deep-black tint, and this is perfectly effected by Indian ink, which is a combination of lamp-black and gelatin. For tinting in imitation of the iris, blue or brown pigments will be required, and other colors may be blended with artistic effect. To perform the operation, he does not ordinarily find it necessary with adults to use either the speculum or the fixing forceps. Operations on children or on restless adults may require the spring-speculum and fixation of the globe with forceps, and even anæsthesia might in some cases be necessary.

The Influence of Bromide of Ammonium on Quinia. H. C. Beall, M.D., of Coloma, Mo. (Kansas City *Med. Journal*, Aug., 1872), records his observations, with cases, on the corrective influence exerted by the bromide of ammonium on the action of quinia. By the use of the two agents in combination, he has succeeded in entirely preventing the cinchonism that usually follows the use of quinine in quantities sufficient to destroy the malarious influence; and, in cases wherein it did not succeed, its influence was clearly seen, the intensity of the cerebral excitement being sensibly diminished. He has also found that the bromide of ammonium exerts less influence on those cases that had repeatedly taken quinine in quantities sufficient to produce severe, and often repeated, cinchonism; yet even in such cases it has not proved entirely powerless. In no case has it apparently diminished the effect of the quinine; but, on the contrary, has seemed rather to serve as an auxiliary to its action, by holding in check the nervous system, equalizing the circulation, and thereby affording a more favorable condition of system for the action of the antiperiodic.

Intermediate Amputation.—Joseph W. Thompson, M.D., Paducah, Ky. (*Richmond and Louisville Medical Journal*, September, 1872), in cases of compound fracture of the lower extremities, does not believe, as a general thing, in amputations in the intermediate stage. When the time for primary amputation, which is established as decidedly the most favorable stage, has passed, he thinks surgeons had better trust the dangers that may arise in the intermediate condition, be they ever so grave, and await to take the chances of secondary amputation. He is satisfied that if accurate statistics on this point could be had, they would show a better success in taking the chances of the patient passing through the perils of the intermediate period, and then making a secondary operation. He publishes two interesting cases in connection with his remarks.

Chloroform in Eclampsia.—Benjamin Rhett, M.D., of Abbeville, S. C. (*Richmond and Louisville Medical Journal*, September, 1872), gives affirmative evidence of the value of the prolonged use of chloroform for allaying the irritability of the brain in cases of eclampsia; and does not hesitate to commend it to the attention of the profession, not as a curative, but controlling agent in this frightful malady.

Intermittent Fever and Paraplegia.—The *Madras Medical Journal*, of January, 1872, has an interesting Medico-Statistical Report to the Indian Medical Department, by Assistant-Surgeon G. Williamson, M.D., in which he dwells upon the cases of intermittent fever attended with paralysis and anæmia. The cases of paralysis, or rather paraplegia, coming on during the attack of fever, or succeeding it, were remarkable; and he has not noticed any mention of it in works on Tropical Diseases. Morehead mentions paraplegia coming on connected with cachectic conditions, but it is not stated what had induced the cachexia, whether malaria had anything to do with it or not. Some of the cases observed by Dr. Howell appear to have been of an inflammatory nature, as he sometimes uses the term myelitis; but the cases that came under his observation appeared more to be caused by dropsical effusion into the serous membrane surrounding the cord from weakened circulation; the complete absence of pain in loins or thighs, or derangement of the urinary organs or sphincters showed there was no inflammation. The cases were mostly protracted, and some required change of air, but they all eventually recovered, and were returned for duty.

Treatment of Cholera.—Assistant-Surgeon G. Williamson, M.D., 19th M. N. I. (*Madras Medical Journal*, January, 1872), in his treatment of epidemic cholera, while at Nunipilly, India, with his regiment, adopted stimulation internally by a mixture containing arrack, ammonia, æther, and decoct. chillies, Turpentine friction and application of warmth externally. For excessive vomiting, creosote, acetate of lead, and effervescing draughts containing hydrocyanic acid were given, and in some cases found useful. Arrow root conjee and broth were given at intervals, and cold water to relieve thirst. Five cases were treated with a mixture containing: Carbolic acid, ℥ iij. and Sulph. dil. ℥ xx.; Tinct. hyoscyam. ℥ xv.; Aquæ, ℥ ij. Two cases died, and the others recovered.

Experimental Researches on Pericarditis.—S. H. Chapman, M.D., of New York, records his observations on "Pericarditis," with twelve wood-cuts, in the October number of the *American Journal Medical Sciences*, as furnishing additional proof of the truth of the opinions held by Stricker in his controversy with Cohnheim. The specimens collected by him upon this subject during these studies were shown by Professor Stricker, in the course of his argument, for examination by the general assembly at Leipzig. The results of the investigations upon the inflamed pericardium are as follows: 1st.—All cell elements of a tissue during inflammation multiply. 2d.—New formation takes place, first, of cells; second, of connective tissue (false membranes); and, third, most probably of nerves.

Fatal Influence of Syphilis upon the Development of Scarlatina.—According to Dr. E. Woakes, cases of malignant scarlatina which are to be observed during those seasons when the character of this disease is commonly benign, derive their gravity from the fact that the subjects are tainted with hereditary syphilis. To illustrate this view of the subject he details five cases which occurred during an epidemic of scarlatina of nine months' duration, in all of which cases the subjects had this hereditary affection. According to him, this fact explains the well-known fact that in certain families scarlatina is almost always a fatal disease.—*Brit. Med. Jour.*, Aug. 24th.

Poisoning by Prussic Acid.—H. Wardner, M.D., Cairo, Ill. (*Chicago Medical Examiner*, October, 1872), mentions the case of a forsaken married lady, who swallowed an ounce vial full of prussic acid, and was restored by the following treatment: Ice-water was poured from a height of two or three feet upon her head during fifteen or twenty minutes; as this was done, her breathing became easier. The median vein of the left arm was freely opened, and the blood flowed in a small, slow stream, to the amount of four ounces. The head was then surrounded with ice, and hot mustard applications made to the feet and legs, while she inhaled the vapor of ammonia. During the flow of blood from the arm convulsions occurred, which lasted five minutes. The breathing then became natural. After an interval of ten minates there was a recurrence of convulsions, but less severe than the first, after which no more occurred. Two hours after his arrival she responded to the calling of her name, when he left her. The case was one of considerable anxiety to him, on account of the large quantity of the poison taken, and the result of the unusual treatment. A year after the first trial she was more successful in a second attempt "to shuffle off this mortal coil," which terminated her life and sorrows.

Evulsion of the Iris.—W. H. Folker, F. R. C. S., Surgeon to North Stafford-hire Infirmary (*British Medical Journal*, Oct. 5, 1872), relates a case of complete evulsion of the iris without other damage to the lens or sight, with perfect restoration to the eyeball. The patient, a railway pointsman, aged 42, was pulling at a piece of wood, when a portion of it suddenly broke off and flew up, striking him in the right eye with the splintered end. On examination, he found a wound in the outer and lower edge of the cornea. Atropine was at once applied, and antiphlogistic treatment employed. When all inflammation had subsided, and the corneal wound had healed, the iris was found to be completely torn away, a piece of the size of about two pins' heads only remaining at the corner of the wound. There was for a long time great intolerance of light, which, however, gradually subsided, and the patient at the date of writing was able to bear any moderate amount of light. The iris was perfectly clear. If anything the eye was slightly contracted.

Although there are on record cases of congenital absence of the iris, but such cases as the one recorded, he thinks, is sufficiently rare to justify him in thinking it worthy of publication.

Dengue Fever of India.—William W. Dunkley, L. R. C. P., Edin., Stoke-on-Trent (*British Medical*

Journal, Oct. 5, 1872), having been present in India during the recent epidemic, and having had cases of this disease under his care, gives a short, but interesting account of it. The term "dengue" is a corruption of the word "dandy." This disease was formerly known as the dandy fever by the natives of certain parts of the East Indies, because persons suffering from it assume a peculiar stiff gait when the subjects of the painful joints so common in the disease. The disease often begins suddenly, with little or no warning. The nature of the case is easily made out if the primary rash be present, which frequently happens within an hour or two of the commencement of the illness. It generally appears as an erythematous eruption of a bright-red color, sometimes only on the face, and sometimes almost or completely covering the body. It very much resembles the rash of scarlatina. It is not constant, and the fact of its being absent does not by any means prove that the case is not one of dengue. The pulse is often comparatively little higher than the normal standard, being often 95 or 98, and seldom rising much higher than 100.

In regard to treatment, after reading Dr. Charles' clinical lecture on dengue, he tried the tincture of belladonna, and it proved very useful, in doses of from eight to twelve minims. The pain was quickly relieved, and the patient had sleep. The remedy need not be continued long after the pain is relieved, and the patient's restlessness calmed. No other medicine is usually necessary, except perhaps a saline mixture, containing liq. ammon. acet. sp. ætheris nit., tinct. hyoscyami, and aqua camphor. The severe headache may be relieved by ice applied in a bladder to the head, and the strength should be kept up with nutritious soup or beef-tea, and milk, with occasionally a little brandy in it, etc. When the fever has abated and the terminal rash disappeared, a tonic is generally necessary, and a generous diet, with beer or wine, to bring up the patient's strength, which is often very much reduced. Patients often suffer from pains in the joints after an attack of dengue; but they usually pass off soon, and seldom require special treatment.

Chloroform in Labor.—Harvey L. Byrd, M.D., of Baltimore (*Physician and Surgeon*, Oct., 1872), gives the following observations concerning the use of chloroform in labor. It is of the greatest moment that the pulse and respiration be carefully watched from the commencement to the close of its administration, as much so, in fact, as in any other condition of the organism justifying or calling for its administration, if danger is to be avoided from its use. These functions afford the only accurate and sure indications of the propriety or impropriety, of continuing the inhalation. The administrator should stop immediately, if the pulse becomes weak, and the respiration difficult or irregular. Any hesitation or faltering in either should demand the instant cessation of the inhalation. Careful attention to these facts will enable physicians to keep the larger majority of women sufficiently under its influence, when desirable to do so, for hours; and thus through its agency, labor may, when necessary, be rendered absolutely painless.

Atropia Poisoning.—Thomas Opie, M.D. (*Physician and Surgeon*, Oct., 1872), by way of corroborating and giving prominence to the view that the physiological effects of opium are antagonistic to those of belladonna, reports a case of poisoning by atropia successfully treated by tincture of opium.

Aneurisms of Arteries at Base of Brain.—In an article on "Aneurisms of the Arteries at the Base of the Brain, their Symptomatology, Diagnosis, and Treatment," by Roberts Bartholow, M.D., of Cincinnati, Ohio (*Am. Jour. Med. Sciences*, Oct., 1872), based on the study of a case of aneurism of the basilar artery occurring in the practice of Dr. Isham, of Cincinnati; the letters of Lebert, containing 86 cases of intracranial aneurism collected from various sources; the monograph of Durand, embracing the statistics of Griesinger, of Lebert, and of Gougenheim, and cases published in various Journals and Society Transactions, the following statistics are given, grouping the arteries of the base into three systems: Internal carotid and its branches, the vertebro-basilar arteries, and the middle meningeal artery; cases of internal carotid (Lebert) 76, (Durand) 29, (the writer) 11. Of vertebro-basilar (Lebert) 35 cases (Durand) 11, (the writer) 7. Of middle meningeal (Durand) 3. According to Lebert and Durand, the individual arteries are effected in the following order: Basilar 36 times, middle cerebral, 34; internal carotid, 21; anterior cerebral, 13; posterior communicating, 8; vertebral, 5; posterior cerebral, 3; inferior cerebellar, 3; anterior communicating, 2. The 17 cases collected by himself make the following exhibit as regards individual arteries: middle cerebral, 7 times; basilar, 4; internal carotid, 2; vertebral, 2; anterior cerebral, 1; posterior cerebral, 1. With regard to the side of the brain on which aneurisms more frequently occur, the statistics of Lebert and Durand and those collected by himself do not agree. According to these authorities the difference in the two sides is as follows: Right side of the brain, 25 cases; left side of the brain, 35; occurring on both sides, 5. His own figures are as follows: Right side only, 6 times; left side only, 5; on both sides, 3. As regards sex, the proportion between male and female is nearly the same in his collection of cases as in the collections of Lebert and Durand. Of 114 cases given by these authorities, 61 were males and 42 females. The sexes in his cases were distributed thus: 10 males and 7 females.

Ectopia Cordis.—At the September meeting of the Suffolk District Medical Society, Dr. Fitz exhibited a fœtus which had been sent to him by Dr. Norris, of Cambridge. It presented an ectopia cordis; the heart was lying entirely outside the walls of the thorax, suspended in its place by the attachments of the large vessels. The pericardium was to be observed posteriorly, but not anteriorly. The child lived ten minutes after delivery, the pulsations of the displaced heart continuing that period. Besides this abnormality of the heart, there was a double harelip deformity.

Dr. Jackson remarked that specimens of ectopia cordis were preserved in the foreign pathological museums, but, so far as he knew, this was the first instance of the kind reported in that vicinity.—*Boston Medical and Surgical Journal*, October, 10, 1872.

The Fruits of Petroleum.—The subjoined commercial combustibles are made from crude petroleum:—

	Sp. Gravity.	Boiling-point.
Rhigolene	625	65° F.
Gasolene	665	120° F.
C. Naphtha	706	180° F.
B. Naphtha	724	220° F.
A. Naphtha	742	300° F.
Kerosene oil	804	350° F.
Mineral sperm oil	846	425° F.
Neutral lubricating oil,	883	575° F.
Paraffine	848	——

—*American Pharmacist.*

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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

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A PROSPECTIVE HEALTH LAW.

THE promises of reform which the dominant political party have made since the election, naturally give more than usual interest to the announcement of the fact that the Legislature has commenced its session for 1873. As has been before intimated, the Committee of Seventy—the self-constituted custodians of the municipal interests, and the presumed controllers of political influence—have threatened our legislators with another charter. It will be recollected that last year the same committee carried out a similar threat, and, after a protracted and stubborn fight against what for the sake of their argument they called corruption, they were forced to yield to a defeat of their pet schemes of reform, and to sacrifice their opinions to the presumptuous wisdom of the majority.

It is to be hoped that the gentlemen who took such an active interest in the charter of the Committee of Seventy last year have been able to benefit by past experiences in legislation. They can certainly give no better evidence of a desire to meet the wishes and requirements of the community than to ignore the scheme of cumulative voting which formed the pivot upon which all their reform measures revolved, and which in itself was considered so defective by the highest legal authorities of the State.

But this is by the way. We leave all questions of the constitutionality of such measures with our law-makers and law-expounders, and confine ourselves to the consideration of such matters in a prospective charter as fall legitimately in our province as sanitarians. We are, as a profession, directly concerned in the framing of proper health laws. In view of the promises made of reform, and in view of the necessity of such reforms in our health department, the subject invests itself with more than ordinary interest at this time.

It is well known that the charter which brought the present Health Board into existence was framed more for the sake of perpetuating the political power of the Tammany Ring than for any other object. It was in fact so thoroughly political in its organization, that no one expected anything from it, and no one is now disappointed to find that it has failed to properly perform its legitimate duties. All the real work that has been accomplished has been by the executive officers and their assistants in the several bureaus.

The suggestions for reform are very naturally based upon acknowledged defects in the organization and working efficiency of the present board. To remedy some of these defects would not be difficult; and it is with such an end in view that we would offer some suggestions to our legislators.

In the first place, we contend that the Health Commission should be an independent department. This remark would seem on its face to be unnecessary, were it not the fact that last year the "Committee of Seventy" swallowed up all the distinct departments into what was styled a Department of Public Safety. This Department of Safety was to be under the charge of seven persons, and was to represent the Police, Health, and Fire Departments, and the Department of Public Buildings. We objected to this arrangement on many grounds, the principal one of which was that it would be impossible for any seven men to attend to more than one of these departments properly. And in regard to the Health Department, there was the very particular objection that no provision was made in the Board of Safety for the appointment of a single medical man. This and other arguments were urged against the practical workings of any properly organized Health Bureau, and we were pleased to learn that they not only commanded the serious attention of the legislators, but in the main agreed with the views expressed by eminent jurists in regard to other departments.

In the second place, a Health Commission should be composed of medical men, if not entirely, at least in a majority. The experiences of the present Health Board prove the opposite of this view in a striking manner. The medical element in this Board has been the merest cipher as to any influence which their opinions or counsels may have had upon their colleagues. At least their professional brethren have yet to hear of anything to the contrary of such an assertion. One of the reasons for this has been that there are but two Medical Commissioners, with the Health Officer of the port, against six laymen. This may also be the explanation why there has been, during the past year particularly, such stupid legislation in regard to sanitary matters, and such a disposition to work for political capital upon the slimmest possible show of benefiting the people. After all, of what good is a carefully considered professional opinion given by one or two medical men in a Board, when it

can so easily be cancelled by the votes of a majority of laymen! Until it can be proved that an educated medical men outside of his professional attainments has not the common sense and prudence which belong to any ordinary layman, we shall maintain that the medical profession have an unquestioned right to be fairly represented in every Health Board in the country. To add to the efficiency of a Health Board thus composed, it would be desirable to have a representation from the Police Department in the Board by one or two of the Police Commissioners. In respect to organization, the Metropolitan Health Board created in 1866 was a model of its sort, and its efficiency was acknowledged by every one who cared to spend the time for an impartial investigation.

In the third place, the appointments, at least as regards medical members of the Board, should not be political. The community have a right to expect that a man's scientific knowledge concerning sanitary matters should be measured by some other gauge than party claims. The profession have suffered not a little by such appointees claiming to represent them, and on more than one occasion have been forced to express themselves accordingly. The proper appointing power for a city naturally belongs to the Mayor, and his appointments of medical men for presumed medical attainments and special fitness for places of medical trust should be governed by parties who are the best judges of such attainments. In a word, the medical profession, through their societies or journals, should recommend or indorse suitable candidates. The history of our health appointments during the past few years has shown the very opposite to be the rule; the only guarantee for keeping a position being the ability to act as political weathercocks and party wire-pullers.

In regard to the necessary heads of bureaus, we may say a word. As they perform the really hard labor, their salaries should be in proportion—at least equalling those of the respective commissioners; and when the question of salary shall be taken into consideration, we hope to see ample pecuniary acknowledgment made for the over-worked, conscientious, and ever-ready Sanitary Inspector.

There are many other suggestions connected with the framing of suitable health laws which, not admitting of a general application, are deferred until there may be a possibility for their consideration in connection with some special provisions in the proposed new law.

THE NEXT PRESIDENT FOR THE STATE MEDICAL SOCIETY.

The question of the presidency of the Medical Society of the State of New York for the ensuing year is now beginning to claim the attention of the members of the organization. The position is one of such honor that no medical gentleman throughout the State is disposed to decline it. It has been always held by representative men, and there is no doubting the fact that the nominating committee will jealously guard the honor and dignity of the office.

The city of New York has been gratified in the choice of Dr. Agnew, the present president; and the next nominee should come from the rural districts. We expect to see Northern or Western New York represented at the next meeting, but should prefer the former, as it has not within our recollection furnished a presidential candidate. The presidency rightfully belongs to Northern New York; and the ambitious in other localities should courteously withold their claims in consideration of performing an act of tardy justice.

Reviews and Notices of Books.

Lessons in Physical Diagnosis. By Alfred L. Loomis, M.D., Prof. the Institutes and Practice of Medicine in the University of New York; Physician to Bellevue and Charity Hospitals, &c. Wm. Wood & Co. 1872. 8vo. Pp. 240.

The previous editions of this volume have been very well received, and, from their ready sale, appear to meet a well-recognized want.

There is palpable advantage in presenting the science and art of physical diagnosis by itself, apart from historical, pathological, and therapeutic considerations.

The great importance is felt by thus for the time making it the point of view in the study of disease: differential elements are illuminated by juxtaposition. Time is saved and slender libraries supplemented by gathering in one volume what must otherwise be sought in many.

Thus we find the plan of the work excellent, and, within the limits proposed by the author, very well carried out. It would be easy to point out many omissions; completeness and conciseness to a certain degree exclude each other; but in the space assumed it would be difficult to include a greater variety and amount of sound teaching. The style is compact, clear, positive and exact. It is free from all irrelevant discussions; nothing is allowed to disturb or confuse the distinct image of clinical facts. The teaching is of course, in the main, not new, and there is no reaching after novelty. But it has been very carefully collated. Little is given on the mere authority of others; contradictory statements are harmonized or otherwise disposed of by the judicial authority of the author as an expert; and we are persuaded that nothing is allowed to pass for doctrine which he is not fully prepared to defend from his personal researches.

The first half of the volume relates to the lungs and heart—with the other viscera of the thorax. Forty pages are given to the abdominal viscera; twenty to chemistry of the fluids; ten to microscopy; sixteen to the mechanical aids to diagnosis of respiratory and vascular disease; six to the ophthalmoscope, five to thermometry, &c., &c.

The mechanical execution of the book is very good in paper, type, &c.; but there is any quantity of bad spelling (presumably typographical errors), and occasionally an erroneous statement—some of them not so palpable as that which asserts that the ophthalmoscope mirror is *seventeen* inches in diameter!

The book is very creditable to its acute and indus-

trious author; and whoever shall practically master its contents cannot fail to be a discriminating and well furnished diagnostician.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 7, 1872.

DR. EDMUND R. PEASLEE, PRESIDENT, in the Chair.

DISCUSSION ON ACNE.

SUBJECT:—Discussion of Dr. Bulkley's paper on "Acne," and Report of Committee on Dr. Howard's paper.

The following new members were elected: Dr. T. Dwight Martin, of Morrisania, Westchester county, N. Y.; and Drs. Simeon N. Lee and Adoniram B. Judson, of New York city.

Appropriate resolutions with reference to the decease of the late Dr. Charles Henschel, drafted by Drs. Buck, Burrall, and the President, were submitted to the Academy, and passed.

The Committee to which was referred the paper of Dr. Benjamin Howard, entitled "The Preventable Deaths from Drowning within the Metropolitan District of New York," reported the following resolutions, which were adopted:—

Resolved, That the insufficient provisions made within the Metropolitan District of New York to save persons from drowning, call for some well-considered, vigorous, and immediate action on the part of the people.

Resolved, That this Academy will give such aid in exciting public attention and organizing public effort, as the importance of the subject invites and the functions of the Academy will allow.

The motion of Dr. A. C. Post, to continue the Committee, with power to devise some practical means in the future, for submission to the Academy, was passed.

DR. FANEUIL D. WEISSE, in opening the discussion, made the following remarks:—

Mr. President and Gentlemen:—I have listened with great pleasure to Dr. Bulkley's able and exhaustive paper upon this most unseemly and annoying, though not dangerous disease. It is an eruption for which, in its most frequent forms, such as the punctata, papulata, and indurata, the general practitioner does not as a rule undertake treatment, usually putting off the patient with the statement that "he or she will outgrow it;" if, however, importuned to treat it, he does so empirically, and with but little confidence as to a favorable result.

I must differ with Dr. Bulkley in the name which he has contributed to perpetuate. Acne, like eczema, is an unscientific term, which has been handed down to us from writers who had but little knowledge of the pathology of the diseases which they named. We find it first in the works of Aëtius, where, from an error of the copyist, the original Greek word *acme*, meaning *efflorescence*, was perverted into the present one of *acne*. I am in the habit of describing this eruption under the name of *Folliculitis seborica*, which I conceive to express the true nature of the affection. It is an inflammation of the walls of the follicle, induced primarily by an altered secretion, which, from its inspissated character, does not flow, but, accumulating, distends it. This pressure, together with the chemical changes of the secreted mass, irritates the wall of the follicle, inducing inflammatory processes therein, manifested by increased functional activity or secretion, producing the black specks of inspissated chemically altered sebum, plugging the follicle (punctata); areolæ of erythema and hypertrophy of the surrounding areolar tissue (papulata indurata). The folliculitis may result in exudation and suppuration within the follicle (pustulata). If a group of follicles is affected simultaneously, it produces the form known as rosacea. If we have a long-continued inflammation, with repeated exacerbations, the hypertrophic form is developed. The more frequent location of this eruption upon the face I conceive to be due to the free supply of blood to the skin of this region, and the ready arterial congestion, as manifested in the blushing from emotional impressions. With this condition of circulation it requires but a slight degree of tissue-irritation to produce an inflammation. I think that this view of the peculiar circulation of the skin of the face, as determining and prolonging its inflammation, is borne out by the fact of how long it takes for erythematous discolorations from other lesions to fade.

The period of life at which this eruption develops, is that wherein the hair is most active in its growth. We rarely see it before puberty, or after fifty years of age, unless at the latter period it should have been continued in a chronic form. As the sebaceous follicle is but an appendage of the hair follicle, and the sebum matures pomatum for the hair, the coincident activity in the development of hair and secretion of sebum is readily appreciated. From 15 to 25 is the period during which we find probably three-quarters of all cases of folliculitis seborœ, with its simpler lesions, viz., punctata, papulata, indurata, and pustulata. At this period the disease is more common in young men than in young women, because of the growth of the beard, after which growth affections of sebaceous follicles of the face are quite infrequent in men. From 25 to 40 years of age the complex lesion, rosacea, develops most commonly in women, and this, in its more chronic forms, may become hypertrophic.

As to the treatment of this eruption in its various forms, I resort to both external and internal measures; of the two, after correction of the digestive system, such as dyspepsia and constipation, I give decided preference to the external treatment. Of internal medicaments I have used arsenic, so as to effectually test its efficiency, inducing its toxic effects and sustaining the same from four to six weeks; and I am perfectly satisfied that it is inefficient in this class of dermatic lesions. From iron, particularly the iodide, I have had good results in scrofulo-anæmic patients. I can testify to the efficacy of Dr. Gubler's treatment with glycerine, and my own observations of affected patients is, that, with but few exceptions, they exclude fats of all kinds from their food. This observation I had made previous to seeing Gubler's experience, and, acting upon it, recommended my patients to take cream as an article of diet, from a half-pint to a pint a day, also almond and olive oils; and upon this theory I accounted for the successful use of cod-liver oil, as recommended by the French dermatologists particularly. Of topical measures, the first and most essential in my experience is the careful emptying of the follicles of their contents; this applies equally to all the lesions; it is effected by a fine cambric needle and well-directed pinching of the orifices. The second indication is to allay inflammation by means of hot water, rendered milky by kneading a bag of wheat bran in it. This is

to be used as a douche for ten or fifteen minutes at a time, repeated two or three times a day. Of medicinal applications I have tried about all that are recommended, and must give the preference to the non-irritating ones, with one reservation,—that chronic papular and tubercular lesions call for nitrate of silver, or even more powerful escharotics. About two years ago I commenced using the following preparations and local applications, viz., an ointment of sebum or suet carefully tried out, and scented with almond oil or some other perfume, and a compound powder consisting of equal parts of subnitrate of bismuth and creta preparata. These—the ointment and the powder—are to be used in the following manner: Before retiring, the patient is to use the hot bran douche, as above directed; after carefully drying, the ointment is then gently applied to the face, and allowed to remain on over night. In the morning the face is not to be washed, but the powder to be freely applied with a powder puff, and allowed to remain on ten or fifteen minutes, when it is to be brushed off (carrying the ointment with it) by a very small soft brush.

I do not wish to be understood as presenting this method of treatment as one to be resorted to empirically in all cases; nor do I intend to convey the idea that all cases are to be treated exactly alike, without taking into consideration diathesis, inherited or acquired, antecedent history, present hygienic conditions, and the possibility of external causes for the disease. When the case presents the more complex lesion of the rosacea form, I find excellent results in allaying the burning sensation and redness with this ointment: R. Sulphur, ℥ss.; pulv. camphoræ gr. v.; adeps, ℥j. M. Apply two or three times a day.

Hoping that others present may contribute their several experiences, I would again thank Dr. Bulkley for the pleasure and instruction his paper has afforded me.

Dr. John C. Peters said:—Mr. President, I will confine my remarks almost exclusively to the treatment of acne, with only such allusions to the pathology of it as may be necessary to elucidate the subject. Acne is universally admitted to be a disease of the sebaceous glands, sometimes of local and at other times of constitutional origin. It may easily arise from disease of the skin, for the soft cellular, or so-called Malpighian layer of the cuticle dips down along the hairs into the sebaceous glands, the cells of which are a modified continuation of those of the Malpighian layer, the modification consisting in the production of a great excess of fat molecules. As the sebaceous glands are also proper appendages of the hair follicles, acne may arise from abortive development of the hairs, irritating and disordering first the hair follicles, and from thence descending down into the sebaceous glands. Or it may commence in the epithelium, for these glands are lined throughout by a fine epithelium, the function of which is to change the albuminoid contents of the epidermic cells of the sebaceous glands into sebum or sebaceous fat. If this fatty metamorphosis does not take place, and the contents of the sebaceous glands become more albuminoid than fatty, then not only do the hairs and skin become less soft and flexible, but the one becomes hard and irritating and the other dry and cracked: for the normal unctuous secretion of the sebaceous glands should first anoint the hair-bulb, and then ooze out upon the stem of the hair and the neighboring surface of the cuticle. Hard, irritating, albuminous plugs may thus be formed in one or many sebaceous glands in place of the normal sebaceous matter, consisting of a mixture of olein, saponified fat, cholesterin, a small quantity of a peculiar unnamed albuminoid substance, and a few epidermic cells, the ashes of which should abound in earthy phosphates.

Again, these albuminous plugs not only act as mechanical irritants, but may, especially in scrofulous, lymphatic, or phthisical subjects, undergo cheesy degeneration, or further chemical change. We may infer what sometimes takes place in the walls of the sebaceous glands in acne, from what occurs on the skin in seborrhœa, for if the mass of sebum be allowed to remain it decomposes, then macerates and irritates the skin, producing redness, moisture, and inflammation of it. The same occurs on the glans penis, if the smegma or sebum be allowed to accumulate under the prepuce. The walls of the sebaceous glands become involved in the inflammation, which may extend to the connective tissue beyond, causing acne indurata, or even hypertrophica.

But acne is so often connected with gastric, intestinal, renal, uterine, and ovarian derangement, that it is probable that it often has a constitutional rather than a local origin; or, at the very least, these internal disorders will keep up and reproduce the acne again and again until they are properly treated and removed. If they do not cause the acne they prevent its cure, and insure its frequent relapse. We can get a little light upon this matter by a slight study of artificial acne, such as is often produced by the iodide and bromide of potash; these substances, as is well known, are absorbed, and may be detected in the urine; if they are not freely eliminated by way of the kidneys, they are carried in excess to the skin and there induce acne. Hence it is quite probable that in some dyspeptic, intestinal, renal, and uterine disorders, some changed or retained substance is carried to the skin, and there produces some form of skin disease, perhaps acne, or will so irritate and excite the skin that its previous diseases either remain incurable or become liable to relapse after relapse.

It is hardly necessary to discover new and wonderful remedies for the cure of acne, for it is very probable that we have all that is required except a more certain and accurate application of them. Among the most useful remedies is *acetate of potash*, when the urine is scanty and dark-colored; it is a mild but efficient diuretic in doses of 20 to 40 grains, and not only increases the quantity of urine, but also its solid constituents in a remarkable degree. It doubtless acts as a depurative and eliminative remedy. The sulphuret of potash—℥i. to Oi. of water—applied externally, twice a day, is recommended by Todd, who also gives it internally, as he thinks it peculiarly serviceable when dyspepsia is present, and the mucous follicles of the stomach are particularly implicated, and he thinks it exerts a specific action upon these gastric follicles. The *carbonate of potash* is an antacid, alterative and diuretic; in inflammatory acne ten or more grains may be given with 3 to 5 grains of *nitrate of potash* from 3 to 6 hours after each meal; aided by a lotion of ss. to Oi. of water.

The *borate of soda* is a refrigerant, diuretic, and emmenagogue, in doses of 5 to 30 grains. For external use, Copland prefers a solution of it in rose or elder-flower water to all other remedies; or in sulphur-water, made by pouring boiling water over flowers of sulphur and allowing it to infuse for 10 or 12 hours. Another good lotion is—Borax ℥i.; alcohol, ℥ss.; water, ℥iiiss.; or ℥ss. of borax to ℥viii. of water; or sodæ boracis ʒss. to aq. flor. aurant. and aq. rosæ each ℥ss. It is particularly useful in acne attended with amenorrhœa, or with ulceration of the os, or other uterine disease. When constipation is also present, 3 or 4

grains may be made up into a pill, with 1 grain of aloes. This combination is particularly useful in amenorrhœa with constipation.

The *muriate of ammonia* is an allied remedy, strongly recommended by Jurdelin as an emmenagogue, and having alterative and resolvent properties closely resembling those of mercury. It is peculiarly useful when there is amenorrhœa and bilious derangement. It may be given in 5 or 10 grain doses, in water, three times a day; or made up into a pill with aloes. It should also be used as a lotion.

Sulphur also promotes the menstrual discharge, and relieves congestion of the liver and whole portal circulation, while Jurdelin thinks that it acts specifically on the mucous membrane of the intestines. Some of it is converted into a sulphide by the action of the alkali of the bile, and is enabled to enter the blood, whence it appears in the urine as a sulphate, or one of the lower oxides of sulphur, and some of it is even converted into sulphuric acid, and becomes exceedingly useful even in acne cachecticorum when the urine is neutral, or even alkaline. Ringer strongly recommends it as a lotion in menstrual acne, viz.: Sulphur, ℥ i.; glycerine, ℥ i.; water, Oss., well rubbed in several times a day. He says, if efficiently applied it speedily benefits the eruption, even when it has persisted for years uninfluenced by other treatment. It should be used internally at the same time, in doses of 3 or 4 grains, several times a day, made up into a pill with ¼ or ½ grain of aloes when there is amenorrhœa, constipation, biliousness, etc.

The *iodide of sulphur*, from its resolvent properties, is most useful in acne indurata and rosacea; in very obstinate cases ¼ or ½ grain doses may be given internally, and increased to 1 or 3 grains, aided by an ointment made of 5, 10, or even 30 grains to the oz. of cerate.

The *green iodide of mercury* is also most useful in the indurated variety, especially when there is obstinate chronic disease, even induration of the liver or some other organ. It may be given internally in doses of ¼ or ½ grain, combined with ext. of conium or aloes; and applied externally, 5 to 10 grains to the oz. of cerate.

Corrosive sublimate has been given internally in doses of $\frac{1}{10}$th or more of a grain; or in teaspoonful doses of a solution of 10 grains, with an equal quantity of muriate of ammonia in a pint of distilled water. A good lotion is made with 5 to 10 grains in an oz. each of spts. of rosemary and alcohol, and 6 ozs. of mist. amygdal. amaræ. But I prefer the *ammonio-chloride of mercury*, using only 5 to 10 grains instead of the usual 40 grains to the oz. of cerate. But this remedy and arsenic and cantharides should be kept for the most obstinate and rebellious forms. It is said, if the plug in the sebaceous glands becomes saturated with serous effusion, it is easily removed; the above and other irritating remedies are said to accomplish this; while suppuration has been hastened by antimony when this progressed very slowly and too tediously.

Such, Mr. President, are the principles of treatment which I prefer; viz., using the carefully selected remedy internally and externally, and having a careful regard for all internal and constitutional derangements.

Dr. Benjamin Howard spoke as follows:—

After the exhaustive paper of Dr. Bulkley, and the able remarks of the gentlemen who followed, nothing remains to be added. I am tempted, nevertheless, to say just a word; because, in the first place, I differ as well as agree with some of the views just expressed; and because, in the second place, like almost every member present, perhaps, I have a cherished remedy which surpasses all others in my own estimation. The leading points of interest in this discussion will be covered, if, for convenience, we ask concerning acne, 1st. What is it? 2d. What causes it? 3d. What will cure it? Acne consists in a retention within a sebaceous follicle of its own proper secretion, with or without changes in the sac or its contents. Distention, congestion, or inflammation of the follicle may follow, and the contents may degenerate, be mixed with pus, or desiccate. Within this pathological range all the ordinary forms of acne are included.

As to the cause of acne, I should be inclined to differ from my friend Dr. Weisse. I think it is incorrect to ascribe acne to the irritation of the follicular membrane by its own secretion. If there be a morbid sebaceous secretion, there must before that be a morbid follicular membrane. Correct or incorrect, the statement does not touch the cause of acne, but, if correct, deals with the disease only. The imprisoned secretion, the changes occurring in it, the inflammation of the sebaceous follicle—the first, always, and the two latter conditions, if present—belong in no sense to the causes, but to the disease itself.

Looking at the list of causes quoted upon the diagram before us, we cannot dispute them, but they seem sufficiently numerous. I am sure we have all seen hundreds of persons, moreover, exposed to sunshine, cosmetics, filth, and nearly all the other reputed causes, who nevertheless had no acne. On the other hand, we must all have met with cases of the worst sort where these reputed causes were scrupulously avoided. The less we say about any single cause of acne, the better perhaps we shall agree. Soap and sunshine are both reputed by one to be a cause, and by another to effect a cure. The most we can claim to know in the matter of causation is, that there are certain combinations of coincident conditions of which the different forms of eruption of which we are speaking are, respectively, what the disease used to be termed, "the *acne*." *Locally*, the condition most favorable to it is that which most promotes accretion, and closure of the excretory ducts of the sebaceous follicles, so as to cause imprisonment of their proper secretion. Among the endless variety of *constitutional* causes, I believe pubescence and constipation are the most constant.

Treatment.—I fear the confession of so many remedies is but poor commendation of our knowledge. Of local applications I think I have overlooked none, but have used them all in their turn, including washes of the bichloride, even to vesication; but in no case have I observed them to have any special value. If evulsion can be practised without too much irritation, the worst follicles may be emptied at the outset, as they refill with decided advantage. In addition to this, anything which tends to prevent desiccation of the orifices of the ducts, and keeps the skin pliant, will meet the leading indication. *Constitutional* treatment must be the great reliance, and should be directed chiefly to whichever of the abnormal conditions is predominant—pubescence being amenable only to time, however well or ill the treatment. Oftentimes the first doctor must be content to be the last, while in the estimation of the patient the last is just as sure to become the first. Next to pubescence, I think the most common coincident condition is constipation; and this brings me to the revelation of my much-cherished remedy, which usually consists simply of aperient doses of cream-of-tartar. It makes an agreeable drink, and is taken morning and evening, in quantities which are sufficient in each case to be very slightly aperient. If the patient suffers also from

indigestion, especially combined with acidity of the stomach. I prescribe: R. potass. bitart. et soda. ʒj.; rhei pulv., gr. x.; bismuth subnit., gr. x.; soda bicarb., ʒi. M. Divide in pulv. x. Take one powder three times a day.

With the use of these remedies, I have rarely had a case which did not gradually improve; while in the majority of cases the disease has quite disappeared. Explanation I am unable to offer, except that such an aperient, some time continued, may, by its derivative action, promote improvement.

I would say one word respecting the use of arsenic and the more violent remedies in this disease. Whatever benefit they are calculated to afford can come only from their long-continued use; and then, while locally the benefit is very uncertain, the risk to the general health may be quite hazardous.

As in the so-called "operations of convenience," so here, I think we are not justified in attempting a cure by remedies which are more perilous than the disease; therefore, in the present state of our knowledge, such treatment in acne is not to be commended.

Dr. Edward L. Keyes gave the following views:—I have but little to add to what has already been said. I always approach a case of acne with respect; often with a lack of confidence in my power to afford any very considerable speedy relief to the patient. But while I hold acne to be an affection difficult to cure, yet I believe there are few cases which may not be considerably, often wholly, relieved by judicious treatment and unremitting care.

I am in the habit of commencing the study of a given case by a careful review of the family history of the patient. I believe that the tendency to acne is very often inherited, and that such inherited tendency is to be ranked prominently among the predisposing causes. While I cannot but consider acne as being often in the young a signal of sexual distress, of unqualified or perverted sexual yearning, perhaps often unrecognized by the patient; and while I believe in a connection between this cutaneous affection and certain uterine derangements, functional or otherwise, yet neither of these conditions are necessarily attended with acne; nor indeed will digestive derangement, nor any given course of diet, produce acne in every case. Where there exists, however, a family predisposition to acne, an eruption will readily be occasioned by the intervention of any of the numerous adequate exciting causes.

I have marked a tendency to the inheritance of acne in many cases which I have encountered. I have now two sets of cases under my charge where the cross inheritance is plainly and beautifully marked. In both families the boys only are affected, while the girls have escaped, and in both the inheritance is derived through the maternal branch of the family.

When I can discover, in studying a case of acne in a young person, that an older brother or sister, or, indeed, an ancestor, has suffered from the same malady, I am accustomed to derive from the character, course, and duration of the latter case, a valuable aid to prognosis for the case which applies to me for treatment.

I have been forced by observation to an acceptance of two frequently active diathetic predisposing causes to acne—these, the scrofulous and the gouty. The former predisposes to acne punctata, seborrhœa, dry and moist, acne simplex and indurata, and these especially in youngish and middle-aged subjects. The gouty diathesis predisposes, later in life, to acne rosacea and acne simplex.

The previous discussion renders it unnecessary for me to speak further of my views as to the etiology of acne. Suffice it to say, I believe it to be far more often an expression of internal disorder than a mere local affection.

The fulness of the discussion also relieves me from any extended remarks regarding treatment. I endeavor to obtain in all cases a good hygiene for my patient, and a regularity as nearly perfect as possible of all his habits, mainly regarding eating, sleeping, and the intestinal discharges. I believe in the avoidance of sweets, liquors, all fried articles, pastry, and all kinds of food of difficult digestion.

The more healthful exercise in the open air the patient can take, the better. I believe, further, in the curative power of a well-regulated sexual hygiene. Of internal remedies, cod-liver oil holds a high rank, especially with the scrofulous and debilitated; arsenic, I think, does good in many cases where it is easily digested without disturbing the stomach. *Locally*, I like the action of hot water with a little bicarbonate of soda added, and subsequent friction with a soft towel, and some milder stimulating application afterwards; from time to time perhaps using powerful local irritants, especially in acne rosacea.

Dr. Robert W. Taylor:—My experience in the treatment of the various forms of acne has led me to the conclusion that although we can, by various internal and external means, materially benefit or cure our cases, yet that they are quite rebellious to treatment. As to the origin of acne, I am disposed to favor the views which were, I believe, first enunciated in America by Dr. William H. Draper, namely, that acne, as well as other skin diseases, were caused by malassimilation, or, as expressed by Dr. Bence Jones, as errors in oxidation of the tissues. I am very skeptical as to the origin of acne in uterine derangements, and do not believe that uterine catarrh or flexions of the uterus have any influence in their causation; nor have I been able, though I have studied the matter carefully, to make up my mind that any connection existed between menstrual disorders and acne.

I would call attention to the fact that acne is very often aggravated by sea-air, as experienced by persons who for pleasure reside temporarily at the seaside; this point may be of benefit sometimes in a prophylactic point of view. There is a form of acne which is sometimes seen which is not well described in the books, and as it demands a peculiar treatment, it is well to describe its features. It most properly belongs to the indurated type, but unlike that in which the cell-proliferation around the follicles occupies the deep strata of the derma without producing much salience, or if salience is produced, it is not regular and clearly defined; whereas, in the variety I speak of, the cell-proliferation around the follicle produces an elevation which is markedly conical, and, of course, salient, constituting a well-defined papule. The area of these papules is about one line on an average, with a similar measurement as to height, and this may be capped by a minute quantity of pus. Their color is a dusky red, rather coppery, hence liable from color and shape to be mistaken for a syphilide. They generally run an indolent course, involve the deep tissues, and become surrounded by a dense base, and after their final disappearance leave an unsightly cicatrix. The usual site is around the mouth, and they do not have the typical appearance in other localities. For this variety, which, as I say, is rare,—we have had about four examples at the College Clinic,—internal treatment is useless, while local treatment is of decided benefit, as producing small cicatrices in the place of the ugly ones left upon resolution of the lesion. I have found that the very best means of treatment is to bore each papule through

the centre with a *flèche* of nitrate of silver, being careful to thoroughly reach every portion of the papule. After the boring process I order mild lead lotions or emulsion of almonds. In a fortnight the charred papule is thoroughly destroyed, and a cicatrix rapidly forms as I have described. I have tried in one case the application, by boring, of a red-hot needle, but the resulting cicatrices were not as small as when I used nitrate of silver. I should think that perhaps the galvano-cautery might be of benefit in these cases. As to treatment, I am much in favor of local measures. In applying lotions and outward applications generally, the essential point, in my opinion, is to stimulate; and I think that many cases of unsuccess of remedies is due to the fact that lotions are too mildly applied. In acne simplex, which, by the way, is sometimes troublesome in consequence of new crops of papules constantly appearing, I have found benefit from preparations of sulphur, particularly the lotion recommended by . . . . , which consists of two drachms of lac-sulphur, two fluid drachms of spirits of camphor, to four ounces of water. This must be rubbed firmly into the skin and allowed to dry over night, and in the morning it should be slightly anointed with cold cream. I have derived benefit from iodide of sulphur ointment, and lotions of bichloride of mercury, in strengths of two to five grains to the ounce of fluid. At the College Clinic, and in private practice, in cases of acne with much induration, I have seen very marked benefit follow the application of a solution of caustic potash, from twenty to forty grains to the ounce. This is to be freely applied to the spots and allowed to dry, and afterwards washed off in very hot water. This is done at night, and the next day the face is smeared with cold cream. My friend Dr. Draper is much in favor of this treatment, and uses it very frequently at the Clinic.

I think that although acne is a troublesome affection to treat, there is not any necessity for such an amount of polypharmacy as is expended on it, but that relief can be obtained by preparations of sulphur, iodine, mercury, and potash; and I think that these agents, with proper vehicles, are all-sufficient. I have seen benefit from mild ointments of red oxide and of the deuto-iodide of mercury, and in many cases have had good results from the application of mercurial plasters. I have been disappointed in the use of diachylon ointment as recommended by Hebra; it produces very slow and unsatisfactory results. In acne rosacea of the nose, the scarifications recommended by Hebra are an absolute necessity, and often work admirably. Besides stimulation, as regards external measures, there is also another important point to observe, namely, not to change the application too frequently, but to continue vigorously on until the remedy in use has had a fair trial. Many cases of unsuccess are due to the use of remedies for too short a time. As regards internal treatment, I am fully in accord with Dr. Bulkley, which he has so clearly put forth in his admirably complete paper.

Dr. Salvatore Caro said that the remarks he was about to make would be relative to three points:—

Although atmospheric influence, particularly solar heat, is one of the exciting causes of so-called acne solaris, on the other hand, the sun is one of the therapeutical agents in its cure. He received this information from one of his female patients whom he was treating for two years, for acne rosacea on her chin. There was nothing abnormal about her, and the digestive organs were in good condition. Uterine recurrences regular. No mental trouble. Surrounded by luxuries, but indulged with discretion. All the remedies enumerated by the previous speakers were used externally and internally, but without effect.

Being in the country, she took a sail on Lake Mahopac under a very hot sun. Being unprepared, her face was burned, particularly the affected spot, which was blistered; before evening a free discharge commenced —as she remarked—"of a serous fluid, rather thicker and more profuse than usual." About three or four days afterward, the discharge commenced to cease, and by it she was cured of her trouble. The application of cold cloths, previously wrung out from cold water, constituted the local medication during the period of discharge.

On visiting her, on her return to the city, he was surprised to find her cured, and congratulated her upon the success of his last prescription, namely, "Donovan's solution." She remarked that the sun, not the medicine, had effected the cure, and related the above history.

Now, in the treatment of obstinate cases, not omitting internal remedies in each individual case, he concentrates gradually the rays of the sun through a lens upon the affected part, until the whole periphery is well burned. In a short time the skin becomes intensely red, and small vesicles, full of serum, commence to appear; they discharge voluntarily for three or four days, when the healing commences, with final cure. The cold application is the best soother for the pain caused by the heat, and is an effectual help to the free secretion. If the acne is only a follicular affection of certain parts of the skin, with abnormal secretion, in his opinion the blistering action of the sun is the best remedy, rather than lotions or salves. The scorching process is painful; but, limited as are the facts, he considers it worthy of consideration.

His second remark was on the influence of certain articles of food in producing acne. The author of the paper stated that macaroni was one of the articles favorable to the production of acne; without contradiction, he would state that, from personal knowledge, acne is scarcely visible throughout Italy, where macaroni is plentifully used; but in Romagnia, where it was not so much consumed, acne is more prevalent. If this is owing to the deficiency of macaroni, or the abundance of malarious fever which exists at all times of the year, producing as a consequence gastric disturbance, hypertrophy and atrophy of the liver and spleen, he cannot say.

In regard to the new name given to acne by Dr. Weisse, namely, *folliculitis*, he would say that Dr. Barbera (if his memory serves him correctly), in his "Clinical Dermatology," makes a classification of "acne folliculosa," proving that the follicles are the seat of the disease; but he adopts the name of acne, following the style of Aezio.

In some forms of acne simplex he agrees with Dr. Howard, that the let-alone treatment is the best.

Dr. Bulkley remarked that he had noticed that gout and rheumatism were predisposing causes, as mentioned by Dr. Keyes, and also believed in the internal origin of acne.

Dr. James L. Brown, in answer to a question of the President, whether he had found acne in his cases of uterine disease, replied, that in his experience, there was no connection between these affections. He referred to a peculiar kind of diet favorable to its production, and especially the eating of buckwheat cakes.

The President said that if a woman should call upon him, with this affection, between twenty and thirty years of age, unmarried, he would inquire about the bowels and the state of the kidneys before inquir-

ing about any uterine derangement; then he would inquire into that, and see if the menstruative secretion was normal.

In the case of a married woman, with acne, he would find out first whether there was ulceration of the uterus, or any uterine difficulty, or whether the kidneys were at fault, and then the treatment would be directed accordingly. In affections of the kidney he would give acetate of potash, or a pill of aloes et ferri; in inaction of the skin, the spts. of Mindereri.

He thought there was a direct connection between acne and uterine affections, although in many cases there was no visible connection. The eruption around the mouth, mentioned by one of the gentlemen (Dr. Taylor), perhaps was more marked in those patients with affections of the uterus.

The announcement was made that Dr. Austin Flint, Senior, would read a paper before the Academy, November 21st, on "Contribution to Pulmonary Tuberculosis."

The Academy then adjourned.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

(*Continued from page 32.*)

ADDRESS OF PRESIDENT ELECT.

Stated Meeting, Nov. 25, 1872.

DR. ELLSWORTH ELIOT, President, in the Chair.
DR. ELLSWORTH ELIOT made the following remarks:

Gentlemen, Members of the Medical Society of the County of New York:—The candidate who is elected President of the Medical Society of the County of New York, is called to a position of honor for which he may well feel most grateful; to one of responsibility from which he must shrink.

To-night we may look back to the year 1788, when this organization, under the name of "The New York Medical Society," had its beginning; to the year 1806, when Nicholas Romayne was elected "first President under its new act of incorporation." At the date last mentioned our manuscript records begin, and the history which may be gathered from them demonstrates a great power wielded, and important acts performed—acts which, constituting monuments in our history, will remain a part thereof as long as our city shall take an interest in medical science.

Within a year from its incorporation, the members of the Society, then embracing every physician and surgeon in the city who had any authority to practise, and numbering a few over one hundred, organized the College of Physicians and Surgeons, and they became its Board of Trustees. A body so large and unwieldy could found, but they were not equal to the management of, a school of medicine, and another plan was adopted. Although the best feeling has not always existed between the parent and child,—for they have had serious quarrels, even "war to the knife,"—their differences were long since settled, and for many years they have dwelt together in peace.

Again, when an act of incorporation for the University Medical College was asked from our State Legislature, Prof. Paine came to this Society for an indorsement of the proposed institution, and it was cheerfully given.

To have been thus instrumental in laying the foundations of two of our medical colleges is a matter for congratulation; but, without attempting anything like a history, let us pass on to another chapter, of more direct importance to the medical profession in the United States.

The project for the formation of our National Pharmacopœia was submitted first to our County Society by Dr. Lyman Spalding, in 1817. After a vast amount of preliminary work by various organizations and individuals, a convention was held in Washington on the first day of January, 1820, of which Samuel L. Mitchell, one of our most prominent members, was chosen President. Before the close of the year "The Pharmacopœia of the United States of America" was published. The Massachusetts Medical Society had published one in 1808. The New York Hospital had published theirs in 1816. A variety of pharmacopœias and dispensatories had been introduced from the old world, and were made a basis for the preparation of medicines,—one in one shop, and another in another. When the uncertainty which must have existed in regard to medicinal preparations is borne in mind, we cannot estimate too highly the value of a standard generally recognized. The plan first adopted contemplates a revision once in ten years; and every tenth year we therefore have the work written up to a recent date. As precision is of the utmost importance, physicians should conform to its nomenclature in writing their prescriptions. The teachers in medical schools, the authors of medical books, and the writers in medical journals should depart therefrom only so far as new discoveries compel.

It is pleasant and profitable to take glimpses at the past, that we may gain wisdom for the present and the future, which more intimately concern us. Under able presiding officers, the Society has become, probably, the first county organization in the land; and so long as New York is the principal city among our cities, so long should it hold the foremost rank.

Our existence and prosperity should show the necessity of such organizations in every county of our States, and State societies should be composed of representatives from the county societies therein, as is the rule in many if not every State which has organized a State medical society. And here the suggestion may not be out of place, that if our American Medical Association could be so remodelled as to bear the same relation to the State societies that the county societies in New York sustain to our State society, an organization more effective for good would be the result. Each county now sends to the State society, which meets at Albany annually in February, as many delegates as it has representatives in our State Assembly. The county of New York, with twenty-one assemblymen, sends from its county society twenty-one delegates; and all delegates, excepting those who fill unexpired terms, hold their positions for four years. Sixteen permanent members are annually elected from those who have served as delegates, two "from each of the senatorial districts established in 1836," when there were eight senatorial districts in the State, the city and county of New York, the counties of Richmond and Kings, being the first. Our Society has fewer permanent members elected annually in proportion to its size than any other part of the State, not less than forty being now eligible from the societies of New York, Kings, and Richmond County. An election as delegate or permanent member is now regarded so honorable that the competition for those positions is great. How differently stands the matter with the American Medical Association! Our delegations to this body are

never full, and every delegate may continue permanent member by the payment of annual dues.

Let our National Association be composed of as many delegates from each State society as there are congressmen; let a limited number be elected annually as permanent members from congressional districts, as is done by our State society, and the position would become desirable to our foremost men.

The forthcoming year should be one of progress. Our membership should be greatly increased. In this way, every member can do something to enhance our prosperity. He should not rest until every physician in New York is enrolled as a member. A law passed in 1827, and still unrepealed, reads as follows: "The President of every County Medical Society shall give notice in writing, to every physician and surgeon not already admitted into such society, within the county in which the society of which he is president is situated, requiring such physician or surgeon, within sixty days after the service of such notice, to apply for and receive a certificate of admission as a member of such society." How far this law has been obeyed by my predecessors I am unable to say, but our county has increased so largely since the enactment of the law read, that however practicable it may have been at that time, its observance would scarcely be expected of the present incumbent. It has been suggested that a circular should be issued calling attention to the existence of this law, that all may be informed of their duties and their privileges. Meanwhile let every member exert himself to persuade those who are not of us to seek membership without delay.

The organization of the Society contemplates the performance of executive business, in the main, by the Comitia Minora, and hence the meetings of the Society should be devoted to scientific pursuits. If we depart not from this course, our prosperity will continue. If we turn aside, and become involved in quarrels of a personal or ethical character, we shall lose ground. Our Society has had its dark days, and, so far as I have been able to learn, from this cause solely. Quarrels have no attraction for the lovers of science. By all means the Society should maintain a high standard in regard to ethics, and sever connection with all violators of its code; but this kind of business could be done at adjourned or special meetings, so that the main object we have in view should not suffer. If the section in our code of ethics having reference to this matter were strictly followed, our societies would seldom have employment as disciplinarians. "Differences between physicians" "should be referred to the arbitration of a sufficient number of physicians," "or when both parties are members of the medical society of their county, to the censors." Cases will occur when the Society at large must pronounce an opinion upon questions of importance. For instance, recently this Society and our State society have declared that any member seeking redress by a legal process from another, supposed to have acted unfairly, is unworthy of membership. Let us hope that there will be nothing to mar good feeling from this time, and that members will seek the adjustment of difficulties through friends whose judgment and integrity command their respect.

We begin our new year on an eventful day in the history of the city—the day of the month on which it was evacuated by the British forces in 1783. Several of the surgeons in the opposing armies were afterwards among the founders of our Society. To their names, enrolled nearly seventy years ago, is appended a note to this effect: "Late surgeon in the Revolutionary war," etc. As then it was, so now it continues. However much opposed elsewhere, all here unite in a common cause. Every legitimate practitioner of our art is welcomed, and asked to join with us in advancing the standard of medical science.

At the close of the meeting, Dr. Wm. C. Roberts rose, and, after some preliminary remarks, proposed the following resolution:

Resolved, that the Medical Society of the County of New York tender to their late President, Dr. Jacobi, on his retirement from the office he has so long and worthily held, their acknowledgment of the able manner in which he has performed the duties devolving on him; his courtesy of demeanor, and zeal in behalf of the Association.

That he carries with him their warm appreciation of his professional attainments and literary labors in the cause of medical science and philanthropy, and their best wishes for his personal health, happiness, and prosperity.

The resolution was unanimously adopted.

THE PAPER OF THE EVENING.

Dr. A. D. Rockwell then read the paper of the evening, entitled "Central Galvanization."

On motion, the meeting was adjourned.

New Instruments.

REMARK ON A VAGINAL SPECULUM.

By G. WACKERHAGAN, M.D.,

SURGEON TO SOUTH BROOKLYN DISPENSARY.

I DESIRE to call the attention of the profession to a self-retaining vaginal speculum which I have had constructed, with a view to facilitate uterine operations with the patient on the back.

I will simply give a description of the instrument, and leave the practitioner to decide as to its superior advantages. The inferior blade is solid, and 4½ inches

long by 1½ inch wide; it is connected to a sliding frame by a hinge-joint. The curve at the base of the blade is the same as in the ordinary cylindrical speculum.

The superior blade is also solid, and is 3½ inches long; this blade has a longitudinal slide attached, by which it may be lengthened or shortened, and is of great assistance in directing the neck of the womb in the most desirable position for the application of topical remedies or surgical operations,—especially when that organ is anteflexed. The sliding frame is 2¼ inches in length by 1½ inch wide, and is directed towards the pubis; the anterior blade is connected with this, and by a sliding movement up or down in the direction of the arc of a circle, permits the depression of the perinæum to any desirable extent.

The speculum represented in the cut is prepared for introduction by drawing in the longitudinal slide and placing the blades in contact, after which proceed as in the use of the common cylindrical speculum.

The posterior blade is then held firmly by the thumb and index finger of the left hand, while the cross-bar of the sliding frame is pulled forward with the right, until the blades describe an angle of about 35°, when, by a touch of the screw on the left, they are held in position. Then the inferior blade is depressed upon the perinæum, at the same time the superior blade is slid up on the frame and fastened by a screw on the right. Last of all, the longitudinal slide is pushed back, bringing the neck of the womb into view. In order that the anterior wall of the vagina may be more readily elevated, I am in the habit of instructing patients with uterine disease to empty the bladder before presenting themselves for treatment.

I wish here to state that I have copied somewhat from the very excellent instrument of Dr. Byrne, to whom is due the credit of advancing new principles in the construction of vaginal specula.

My speculum is manufactured by Messrs. Tiemann & Co., who have given me every satisfaction in its construction.

366 Clinton Street, Brooklyn, *October*, 1872.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 19, 1872, to *January* 4, 1873.

Bill, J. H., Surgeon, granted leave of absence for thirty days, with permission to apply for thirty days' extension. S. O. 348, War Dept., A. G. O., December 30, 1872.

Byrne, C. C., Surgeon, granted leave of absence for twenty days. S. O. 243, Dept. of the East, Dec. 19, 1872.

McClellan, E., Asst. Surgeon, assigned to duty at Lebanon, Ky. S. O. 266, Dept. of the South, Dec. 14, 1872.

Phillips, H. J., Asst. Surgeon, granted leave of absence for thirty days on Surgeon's certificate of disability. S. O. 230, Mil. Division of the Pacific, Dec. 12, 1872.

Vickery, R., S., Asst. Surgeon, assigned to duty at Jackson Barracks, New Orleans, La. S. O. 196, Dept. of the Gulf, Dec. 14, 1872.

Mackin, Charles, Asst. Surgeon, relieved from duty at Fort Macon, N. C., and assigned to duty at Columbia, S. C.

Matthews, W., Asst. Surgeon, assigned to temporary duty at Willett's Point, N. Y. H. S. O. 243, C. S. Dept. of the East.

Munn, C. E., Asst. Surgeon, assigned to duty at Fort Adams, R. I. S. O. 245, Dept. of the East, Dec. 23, 1872.

Medical Items and News.

Dr. Austin Flint has been elected President of the New York Academy of Medicine.

New York Pathological Society.—The following officers have been elected for the ensuing year:—*President*, Dr. Erskine Mason; *Vice-President*, Dr. E. L. Keyes; *Secretary*, Dr. Geo. F. Shrady; *Treasurer*, Dr. John H. Hinton.

American Association for the Cure of Inebriates.—At the annual meeting, held in New York, the following officers were re-elected for the ensuing year: *President*, Dr. Joseph Parish, of Philadelphia; *Vice-Presidents*, C. J. Hall, of Illinois, and Otis Clapp, of Massachusetts; *Secretary*, Dr. D. G. Dodge, of New York; *Treasurer*, Dr. T. L. Mason, of New York,

Massachusetts General Hospital.—Drs. Geo. T. Shattuck, C. Ellis, S. Cabot, H. K. Oliver, Jr., A. Coolidge, F. Minot, H. J. Bigelow, R. M. Hodges, Geo. H. Gay, and Samuel L. Abbot, the physicians and surgeons of the Massachusetts General Hospital, presented an elegant silver salver to Dr. Benjamin S. Shaw, on his retirement from the position of Resident Physician, which he has ably held for the past fourteen years.

Bazin.—On account of the advanced age of M. Bazin, who has so long been connected with the Hôpital St. Louis, he is obliged to retire from his post which has been so worthily filled. A bust of the lecturer is to be placed, by his present and former pupils, in the theatre wherein his clinical lectures were given.

A Fee to be Desired.—A fee of ten thousand florins, or about $50,000 in gold, has been handed Professor Pitha, of Vienna, on the recovery of young Baron Todesco, the only son of a millionaire.

Catacombs of Paris.—This vast charnel-house contains the remains of about three millions of human beings. The Catacombs, dating from the year 1784, are situated in the south of Paris, and are about 3,000,000 square metres in extent, or about one-tenth of the superficies of the whole city, and run under several streets.

Honorary Fellows of the Obstetrical Society of London.—At a late meeting of the Obstetrical Society of London, the following gentlemen of this city were elected Honorary Fellows of the Society: Drs. Fordyce Barker and T. Gaillard Thomas.

Death of a Noted Southern Surgeon.—Dr. Warren Stone, long a distinguished surgeon of New Orleans, Louisiana, died in that city, December 6, 1872, aged 65 years.

Renewal of Teeth.—M. Magitol (*Canadian Pharm. Journ.*) observes that arsenious acid, when internally administered, possesses the curious property of causing the renewal of certain parts of the teeth.

California College of Pharmacy.—A course of lectures in this new school of pharmacy, located at San Francisco, will commence this winter with the follow-

ing faculty:—Chair of Pharmacy, Wm. T. Wenzell; Chair of Chemistry, Max Tschirner; Chair of Materia Medica, Wm. Searby; Chair of Botany, H. H. Behr, M.D.

St. Elizabeth's Hospital and Home, Utica, N. Y.—The fourth annual report of this institution, organized in 1866 by Mother Bernadina of the Order of St. Francis, and incorporated in 1870, gives the following exhibit:—The hospital is under the supervision of Sisters of the Order of St. Francis, an order six hundred years old, and which is under no other control than that of its own officers. The object is to provide for the medical and surgical care of all persons who may apply for relief, and to furnish a home for the aged and infirm of both sexes. During the year ending Oct. 1, 1872, 125 patients were treated in hospital. Total number of patients received since the opening of the hospital has been 336; males, 129; females, 207; and children under 15 years of age, 26. Of these, 152 recovered; 81 improved; 32 unimproved; 45 died. The most important diseases were remittent fever, acute rheumatism, chronic rheumatism, alcoholism, phthisis pulmonalis, Bright's disease, and various eye diseases. Of the latter there were 22 cases; 8 recovered, 8 improved. Only one death occurred after the eight operations on the eye. This was a case of senile cataract in a patient 82 years old. After the operation, by the modified linear extraction, the patient could see, but she died from paralysis the sixth day after the operation. The following gentlemen composed the *Medical Staff:—Consulting Surgeon*, Alonzo Churchill, M.D.; *Visiting Physician*, Joseph E. West, M.D.; *Physician to Lying-in Department*, Thos. J. Bergen, M.D.; *Surgeon in Charge*, Edwin Hutchinson, M.D.

Albany County Medical Society.—The officers of this Society for 1873 are as follows:—*President*, A. Van Derveer, M.D.; *Vice-President*, A. W. Shiland, M.D.; *Secretary*, F. C. Curtis, M.D.; *Treasurer*, W. H. Murray, M.D.; *Delegates to State Medical Society*, Drs. C. A. Robertson, D. V. O'Leary, A. Fowler, and H. March.

Death of Dr. Daremberg.—This professor of medical history at the Faculty of Paris died recently at the age of 55 years. The works of Hippocrates, Oribasus, and Galen were translated by him. He edited the *Collectio Salernitana*, and wrote many separate treatises, besides his great work, *Histoire des Sciences Médicales*.

Life Insurance.—Wm. Barnes, Superintendent of the Insurance Department of the State of New York, was elected by the Statistical Congress, lately held in St. Petersburg, to prepare a work on statistics of life insurance in the whole world.

Tyndall.—The brilliant course of lectures of Professor Tyndall have more than satisfied his overflowing audiences at Cooper Institute. It is to be hoped this distinguished *savant* will again visit our country and favor us with similar lectures.

Mental Vigor in Old Age.—It is said of Arnauld, the Jansenist, that he wished his friend Nicole to assist him in a new work. Nicole replied: "We are now old; is it not time to rest?" "Rest!" exclaimed Arnauld, "have we not all eternity to rest in."

A Witness necessary in the Administering of Anæsthetics.—A London correspondent of the *Dental Cosmos*, of Dec., 1872, mentions the recent charge of indecent assault by Caroline Pope, a servant, against Jas. T. Grant, dentist, at the Jersey (Channel Islands) police court. She states that "gas" was given to extract a tooth, and while she was under its influence he grossly outraged her. There was no evidence of a rape having been attempted, and many witnesses gave the dentist the highest moral character. He was admitted to bail in the sum of £250 for future trial. This case illustrates once again the extreme danger of administering anæsthetics to women without the presence of a witness.

Medico-Legal Society of New York.—By a vote of the Society, the stated meetings are changed from the second to the fourth Thursday in each month.

Dr. F. D. Weisse will read, January 23, 1873, a paper on "The Obligations and Responsibility of the Administration of Nitrous Oxide Gas, and other Anæsthetics."

Suicide of a Prague Professor.—Dr. Treitz, long the popular Professor of Anatomy in the University of Prague, recently committed suicide by means of cyanide of potassium.

Gen. Meade.—According to the *Philadelphia Medical Times*, the cause of General Meade's death was the formation of a heart-clot during an attack of pneumonia.

The Hospital at Jerusalem.—This hospital, under the care of Dr. Chaplin, is almost supported by the English Society, and is in excellent working order. During the past year, 7,477 out-patients were seen at the dispensary, the majority being women. In two years about 10,000 visits were paid to patients at their homes.

Ovarian Cyst in a Young Subject.—A. F. Carr, M.D., of Goffstown, N. H., writes to the *Medical and Surgical Reporter*, of Nov. 16, 1872, that he attended the post-mortem of a child a little less than three years of age, whose left ovary was enlarged to the size of a half-gallon jug, and estimated to weigh nine pounds.

Gallatin.—Dr. A. H. Gallatin, of New York, has been appointed Director of the Laboratory, in connection with the system of free scientific instruction at the Cooper Union.

A Reminiscence of Dr. Valentine Mott.—Several years ago a late Professor of the New York Medical College often visited old Dr. Mott, and at one of these occasions he saw the medical pocket-case, with small bottles, of the visitor, gotten up for any medical emergencies in the night. He exclaimed:

"Oh, doctor! I hope you have not turned homœopath?"

"Not at all, Dr. Mott; these are the regular allopathic remedies."

"That is right; it would grieve me to see you fall so low; but why these homœopathic bottles?"

"In order to have a druggist's shop in a small compass, and not be obliged to send to a druggist when called out at night."

"Well, that is right; but let me see your selection." Then a critical examination of every bottle took place, and the choice approved as very judicious, till the last bottle was reached, without label, containing white pills, when Dr. Mott said:

"And what is there in this bottle?"

"I have to confess to you, Dr. Mott, that these are plain sugar pills."

"Those are the best pills you have in your whole box," was the remark of the great surgeon.

New York Medical Library and Journal Association.—At the stated meeting of this Association, held December 6, 1872, Dr. Alfred Underhill, the retiring President, made appropriate remarks, in which

stress was made on the following points: The origin of the Association, eight years ago, by a few medical men, at the residence of one of the older members, and its establishment on liberal principles. It is now acknowledged to be not only an exceedingly useful, but an indispensable institution to the medical profession of New York, so much so, that some of our neighboring cities and towns have similar ones. Although the organization has proved successful, and possesses the sympathies of a large proportion of the profession, it is not claimed that its success has as yet equalled the full anticipations of its founders; but much has been done, and the members have not been idle in crowding the shelves and tables with books and journals, and in attending the Friday-evening reunions, etc. Within the last five years the extensive and valuable libraries of the late Drs. Batchelder and Geo. T. Elliot have been added to the collection. With the present year the association has taken a new start, and finds itself located in exceedingly pleasant rooms, and perfectly free from disagreeable annoyances to which the members had heretofore, in some degree, been subjected. In regard to the future, it is the intention of the Board of Direction to have such an additional number of medical journals, books, and monographs, etc., as the future funds will allow. In closing, the speaker urged the younger members of the medical profession to stand by the organization, as they will reap the larger share of its advantages, and will profit likewise by a familiar intercourse with the profession, thus gaining the valuable experience of their seniors, whose record is already made. The Association had his warmest wishes for its continued prosperity.

Dr. John C. Peters, the President-elect, in the course of his remarks, recalled the names of the former Presidents, viz.: Drs. Delafield, Taylor, Buck, Hubbard, and Underhill,—names connected with all good public-spirited works, and crowned with great professional success. He asked the Officers and Trustees to take a double interest in the welfare and success of the Association, they being the Trustees not only of its present property and plans, but of all the bright hopes and expectations which the founders indulged in when they laid the basis of the present useful and progressive institution. The difficulties and obstacles which were in the way were just enough to excite the interest of the members, without depressing their hopes. The ordinary income was nearly sufficient for the running expenses, but not enough to complete some of the back sets of medical journals, nor to bind up all of them as quickly as was desirable. These important objects could easily be attained by the addition of a few more members to the ranks; and by earnest, proper, and gentlemanly means on the part of each member, it could quickly be brought about. The Vice-Presidents are officers not merely in name, but in fact; and he hoped that they would not merely supply the deficiencies of the President, but would outstrip him in material and scientific work. In speaking of the office of Corresponding Secretary, he thought it was comparatively easy to get the Transactions of the different State Medical Societies, the foreign and domestic health reports, army and navy reports, and the government reports of almost every country. He alluded, among several interesting topics, to the fact that a number of duplicate journals and books of the Association would be for sale or exchange. After thanking the members for the honor conferred upon him, and the trust reposed in him, he said he would hand it down unimpaired to his successor.

Dr. A. Jacobi then made some remarks on "Idiocy."

The Association then adjourned.

American Journal of Insanity.—This journal has entered upon its twenty-ninth year, and is the oldest journal devoted especially to insanity, its treatment, jurisprudence, etc. The October number contains the important paper on "Thoughts on the Causation of Insanity," read by John P. Gray, M.D., Editor, and Superintendent of the New York State Lunatic Asylum Utica, N. Y., at the New York State Medical Society, at its annual meeting, February, 1872, and also before the Association of Medical Superintendents of American Institutions for the Insane, held in Madison, Wis., June, 1872.

The Oldest Hospital Trustee in America.—Dr. R. J. Patterson, of Batavia, Ill., says that M. L. Fisher, President of the Board of Trustees of the Iowa Hospital for the Insane, is the oldest trustee of a hospital in the United States.

A Hospital in Poughkeepsie.—Messrs. Matthew and John Guy Vassar have decided to found a hospital in Poughkeepsie, and for that purpose will invest $100,000. The building will be erected on the corner of Lafayette place and Vassar street.

New York Medical Schools.—This city is the acknowledged medical centre of the United States. Over one thousand medical students are distributed in the three well-known medical colleges, viz., Bellevue Hospital Medical College, College of Physicans and Surgeons, and Medical Department of the University of the City of New York.

American Journal of Obstetrics—With the November number of this excellent quarterly journal, edited by B. F. Dawson, M.D., the subscribers will notice that Messrs. William Wood & Co. have assumed the charge of its publication.

The Professions in Pennsylvania.—According to the census of 1872, the number of physicians in the State are 4,843, clergymen 4,341, and lawyers 3,253; total 11,937.

The Next Meeting of the International Ophthalmological Congress is to be held in New York, in 1876.

Disorders of Menstruation.—Dr. Theophilus Parvin has a clever paper in the September number of the *American Practitioner*, on the "Disorders of Menstruation from Physical Causes." He considers these disorders under the heads of *premature occurrence*, *absence*, partial or complete, *difficulty* and *excess* of the flow.

Southern Ohio Lunatic Asylum.—Dr. S. J. F. Miller, of Cincinnati, has been appointed Superintendent of this institution.

New Insane Asylum in California.—Agreeably to the report of Dr. Thomas M. Logan, Secretary of the State Board of Health, and the Governor of California, the Commissioners appointed to locate a new insane asylum, for the accommodation of 500 patients, have selected high land, embellished by a natural growth of oaks near Napa City. In that locality, according to Dr. M. B. Pond, a resident physician, typhoid fever is scarcely known; intermittent fever not at all, except when imported from abroad. Remittent fevers are more commonly met with, but they only occur as sporadic cases, and not at regularly recurring seasons. During the summer the thermometer ranges from 60 to 72°, with only occasional exceptions, and those lasting only two or three days at a time.

Original Communications.

A CONTRIBUTION TO THE CLINICAL STUDY OF THE ETIOLOGY OF PULMONARY TUBERCULOSIS.

The influence of sex, occupation, and antecedent affections on the causation of pulmonary tuberculosis; based on an analysis of six hundred and seventy cases.

Read at a Meeting of the New York Academy of Medicine, November 21, 1872.

By AUSTIN FLINT, M.D.

I have entitled the paper which I shall read this evening, "A Contribution to the clinical study of the Etiology of Pulmonary Tuberculosis;" and let me at once state the sense in which I use the term pulmonary tuberculosis. I use this term in its common acceptation, as embracing the chronic affection or affections hitherto known as phthisis pulmonalis or pulmonary consumption, together with the comparatively rare cases which it has been customary to distinguish as cases of acute phthisis. My contribution will relate to the etiology of pulmonary tuberculosis in this comprehensive sense of the term, and considered entirely from a clinical stand-point. The basis will be the results of an analysis of *six hundred and seventy cases* contained in my medical records. The larger number of these cases came under my observation in private practice, namely, 448 cases. The remainder, namely, 222 cases, were observed in hospital practice. These cases were observed during a period of thirty-four years. They are all the cases of which I kept notes between the year 1836 and the year 1870. The records in all the cases in private practice were made by myself. This is true of the greater part of the hospital cases; but the histories of some of the latter were recorded by others under my supervision. In every instance the cases were under my observation.

These records, as regards completeness and fulness of detail, vary much. Of some of the cases, the histories are quite full and complete; but of many cases the notes are imperfect and incomplete. Some of the cases were under my observation from the commencement of the disease throughout its whole course, but not a few were observed for a short period only. In a considerable number, the patients not only passed from under my observation, but the subsequent course and the termination of the disease were not ascertained. These defects will not lead into error except in so far as concerns negative facts. In my deductions I shall confine myself chiefly to positive facts, that is, to what is noted, drawing comparatively few inferences from what the records do not contain.

With these preliminary remarks, I proceed to interrogate my cases respecting certain points which bear upon questions relating to the etiology of pulmonary tuberculosis.

1. *The influence of sex in the etiology of pulmonary tuberculosis.*

The sex is noted in 669 cases. The number of male cases, in private practice, was 321; of female cases, 127. In hospital practice, the number of male cases was 187; of female cases, 37. In private practice, there were no apparent reasons why a larger number of men than of women, affected with this disease, should have come under my observation. In hospital practice, it may have happened that my service embraced more male than female patients: the latter fact may, perhaps, explain the discrepancy between private and hospital practice in respect of the disproportion between the male and female patients affected with pulmonary tuberculosis. In hospital practice the male exceed the female cases by more than two-thirds; in private practice the preponderance of males is somwhat less. The greater liability of men than of women to this disease is, however, exemplified in both collections of cases. In the two collections united, the number of male cases was 505; of female cases, 164; the excess of the male over the female cases being very nearly two-thirds.

The result of the analysis as regards sex is at variance with Louis' statistics. Of 123 cases observed by Louis during a period of more than three years, in a service at La Charité, Paris, embracing 48 beds, equally divided between men and women, 66 were women, and 57 were men. From the greater number of women, Louis inferred some causative influence belonging to the female sex. This variation, perhaps, illustrates the liability of such statistics to be affected, at different times and places, by extrinsic circumstances which are not always readily determinable. Whether in Paris, in the years 1821, '22 and '23, there were reasons why more tuberculous women than tuberculous men should seek refuge in La Charité Hospital; or whether the causes of tuberculous disease, at that time, in that city, affected more women than men, and if so, whether this is true of the years which have since elapsed; or, again, whether there are circumstances on the one hand peculiar to France, and on the other hand peculiar to this country, affecting the proportion of men to women who become tuberculous,—these, and other points of inquiry, I shall not undertake to discuss.

2. *The influence of occupation on the etiology of pulmonary tuberculosis.*

Of the male cases in private practice, the occupations were noted in 212. In this number of cases, 70 different occupations are represented. 32 patients were clerks. They constitute a much larger representation than is furnished by any of the other occupations. 4 were book-keepers, an occupation which, as regards hygienic influences, is very similar to that of a clerk. 30 were physicians; but, doubtless, circumstances of a personal character determined the number of representatives of the medical profession, so that this number is not to be considered as any evidence of the influence of this calling in the etiology of the disease. The same is to be said of medical students, the number of the latter being 8. The number of merchants is the largest after clerks and physicians, namely, 15. The next most numerous are lawyers, the number being 14. Farmers come next; of these there were 11. There were 2 law students, and 3 students whose line of study was not specified. 6 patients were clergymen; 7 were Southern planters; 4 were commercial travellers; 3 were machinists; 5 were teachers; 2 were manufacturers; 2 were melodeon-tuners; 2 were railroad contractors; 2 were hotel-keepers; 2 were editors; 2 were publishers; 4 were soldiers, and 2 were sailors. Of the remaining 46 occupations, each one was represented by a single case. The following is a list of these 46 occupations: Tailor, maker of burr mill-stones, doorkeeper, cabinetmaker, joiner, portrait painter, banker, lake captain, engineer, fuller, railroad superintendent, contractor, singing-master, deputy sheriff, varnisher, ship-carpenter, grocer, transportation agent, saddler, agent, real-estate agent, carriage-maker, druggist, livery-stable keeper, hostler,

president of college, peddler, gambler, drayman, architect, carpenter, footman, baker, secretary of insurance company, lithographer, broker, provision dealer, diplomatist, brushmaker, homœopathic practitioner, professor of chemistry, telegraphist, liquor dealer, policeman, harness-maker, and inspector of masonry.

Of the cases in hospital practice, the occupations were noted in 158; and 48 different occupations are represented among these cases. The occupation of a laborer predominates vastly over all others, the number being 69. This is readily explained by the fact that, of those who seek refuge in hospitals, by far the largest proportion belong to the class called laborers. Seamen come next in number; 9 were of this class. Clerks and tailors come next; of these the number was the same, namely, 7. 4 were waiters; 3 were farmers; 3 were boatmen; 3 were butchers; 3 were hostlers; 2 were printers; 2 were blacksmiths; 2 were merchants; 2 were tinsmiths; 2 were servants; 2 were stone-cutters; and 2 were soldiers. Of the remaining 31 occupations, each was represented by a single case.

Reviewing the foregoing numerical facts, the attention is at once arrested by the large number of clerks in the cases in private practice. There is no apparent reason for the great preponderance of patients pursuing this occupation, except that it involves an influence in the etiology of pulmonary tuberculosis. Nearly one-sixth of the 218 cases were either clerks or book-keepers. Now, in a hygienic point of view, the distinctive feature of the occupation of a clerk or a book-keeper is its sedentary character, together with confinement within doors, often in small, heated, and illy-ventilated rooms. The hygienic conditions, as regards diet, mental excitements, habits of temperance, etc., are, as a rule, certainly not less favorable to health than in most other occupations. As it seems to me, it may fairly be concluded that these facts go to show an agency in the circumstances belonging to the life of clerks and book-keepers which conduces to the development of pulmonary tuberculosis. The number of merchants may be considered as having, measurably, the same significance, about $\frac{1}{14}$th of the whole number of cases representing this occupation, which in general involves more or less confinement within doors and sedentary habits. Other occupations involving, to a greater or less extent, the same hygienic circumstances are those of the lawyer, the teacher, the printer, the student, the editor, the publisher, the melodeon-tuner and the clergyman. The number of cases in these occupations collectively, was 40, the proportion being nearly $\frac{1}{4}$th of the whole number of cases. Adding together all the cases representing the occupations just named, the number is 91, the proportion being considerably nearer one-half than one-third of the whole number of cases. If, for reasons which have been given, the physicians and medical students be thrown out, leaving the number of cases 174, the cases representing occupations which involve especially confinement within doors and sedentary habits, are more than half the whole number of cases.

It will be observed that in this analysis I exclude the female cases. The occupation in some of the latter is noted as seamstresses, domestics, etc.; but in the majority of these cases the patients could not be said to have any definite occupation.

Exclusive of the cases which have been enumerated as representing sedentary occupations and confinement within doors, and excluding physicians and medical students, the number of cases in private practice remaining is 83. It is noteworthy that, of these 83 cases, 46 represent each a different occupation. The other 37 cases represent 9 occupations, as follows: Farmers, 11; Southern planters, 7; commercial travellers, 4; machinists, 3; manufacturers, 2; railroad contractors, 2; hotel-keepers, 2; soldiers, 4; and seamen, 2.

Another noteworthy fact is this: of the different occupations (55) represented by these 83 cases, one only involves the habitual inhalation of particles which occasion local mechanical irritation of the bronchial mucous membrane. The occupation referred to is the manufacture of burr mill-stones. Persons engaged in this occupation inhale constantly stone-dust. But the patient who represented this occupation had not for many years been exposed to the inhalation of the dust. This case is one of much interest, and I subjoin a brief synopsis of it.

The patient, when he came under my observation, was about 40 years of age. He had recently had repeated attacks of hæmoptysis, and the existence of tuberculous disease was rendered clear by symptoms and physical signs. His death took place about two months afterward. The antecedent history was as follows: Eighteen years previously, he was engaged in the manufacture of the burr mill-stones, himself working in this occupation. He then had cough and other symptoms which appeared to denote pulmonary consumption. He ceased working in the sheds where the mill-stones were manufactured, and attended exclusively to out-of-door duties connected with the business. Gradually he recovered his health, and he remained perfectly well, excepting occasionally cough and expectoration, having become robust and stout, until he had a perineal abscess eventuating in fistula, for which a surgical operation was performed with partial success. A year afterward, while apparently well, he had a slight attack of hæmoptysis. The hæmoptysis recurred, and was more abundant; cough, with expectoration, followed, and the signs showed solidification of lung when he came under my observation, a week after the first hemorrhage.

The autopsy showed recent pleuritic adhesions on both sides, with numerous small tubercles, patches of tuberculous infiltration, and softened collections in the right lung, the left lung being crammed with miliary tubercles without any infiltration. These appearances were, doubtless, connected with the recent rapid tuberculous disease. In addition, near the apex of each lung was a solid mass of about the size of a hen's egg, somewhat larger on the right than on the left side. These masses, on section, appeared to consist of condensed tissue of a reddish color, rather friable, and contained disseminated calcareous particles. Each mass was enclosed in a thick, firm cyst. The masses extended to the anterior superficies of the lungs, and at their site the surface had a contracted, puckered appearance.

It can hardly be doubted that these masses were connected with the symptoms denoting phthisis eighteen years before the death of the patient, although there may be room for the question whether the affection, at that time, was a truly tuberculous disease or a chronic interstitial pneumonia.

Of the cases in hospital practice, the large number of "laborers" has been already accounted for. The number of seamen is explained by the fact that my hospital service sometimes embraced wards appropriated to this class. In seeking for facts bearing on an etiological influence, therefore, these cases should be excluded. Excluding them, the remaining number of cases is 80. Discriminating among these 80 cases with reference to the occupations which are especially sedentary, and which involve confinement within doors, they are as follows: Clerks, 7 cases; book-keeper, 1 case; teacher, 1 case; tailors, 7 cases;

printers, 2 cases; merchants, 2 cases; shoemaker, 1 case; weaver, 1 case; tinsmiths, 2 cases; confectioner, 1 case; barkeeper, 1 case; lawyer, 1 case; total, 27 cases. The proportion is a little over one-third of the whole number.

An important element in this numerical analysis, as compared with that of the cases in private practice, relates to the circumstances connected with different occupations leading patients to seek refuge in hospitals. I will not, however, enter into a consideration of this element. It is to be noted that clerks and bookkeepers here, as in the cases in private practice, are the most numerous, the number being 8 out of 80 cases. The next largest in number are tailors, 7 out of 80 cases. With the exception of weavers (2 cases), the other occupations are represented each by a single case. The cases which do not represent sedentary occupations with confinement within doors (53) are distributed among 34 different occupations. Of these 34 occupations, 24 have each but a single representative. The remaining 19 occupations are represented as follows: Soldiers, 2 cases; joiners, 3 cases; stone-cutters, 2 cases; hostlers, 3 cases; blacksmiths, 2 cases; waiters, 4 cases; servants, 2 cases; boatmen, 3 cases; carpenters, 5 cases; and butchers, 3 cases.

Making due allowance for the circumstances which determine men of different occupations to resort to hospitals, the result of this numerical analysis of my cases in hospital practice corresponds to that of the analysis of cases in private practice. The general conclusion is, that occupation has an agency in the etiology of pulmonary tuberculosis in so far as it is sedentary and involves confinement within doors. If it be said that this conclusion is in accordance with what is already known, I answer, that the correctness of the conclusion is thereby the more certain. My object is to study, by means of numerical analysis, my cases, without reference to similar researches by others; and if the results of my analytical investigation are in conformity with those which have been already obtained, this is certainly no disparagement of their correctness, nor does it impair their value as a contribution to our knowledge.

3. *The influence of antecedent diseases in the etiology of pulmonary tuberculosis.*

My records, in a considerable number of cases, embrace information respecting the health of the patients prior to the development of the tuberculous affection; and I shall proceed to analyze the cases with reference to antecedent diseases which may be suspected of having had an etiological influence. Here, however, my notes contain only certain "positive facts:" that is, I have not been careful to record the absence of diseases which do not appear in the account of the "previous history." The presumption is, that when the records embrace an account of the previous health, diseases of which no mention is made had not occurred. In other words, it is probable that these diseases occurred only in the cases in which it is so stated; but I cannot assert this with positiveness. Moreover, in not a few of the records, the account of the previous health is either evidently incomplete, or wanting. With regard to antecedent diseases, therefore, I shall not assume for the numerical results exactness, as regards the proportion of cases in which they respectively occur. The analysis, however, of my cases will doubtless lead to deductions far more reliable than impressions derived from a merely recollected experience, and still more reliable than the opinions which rest solely on either conjecture or a theoretical basis.

Naturally I am led to interrogate the cases first with reference to certain antecedent pulmonary affections, namely, pleurisy, pneumonia, bronchitis; and in this connection may be considered hæmoptysis.

Pleurisy is noted as having occurred prior to the development of the tuberculous affection in 22 cases. In determining the date of the tuberculous affection, the commencement of a persistent cough is taken as the criterion with respect to pleurisy, and also other antecedent diseases. Now, in determining the etiological influence of the pleurisy, the interval between the pleuritic disease and the commencement of the cough which denoted the tuberculous affection is, of course, an important consideration. It is to be added, that, in deciding that pleurisy had existed at some former period, it was necessary in most cases to judge from the statement of patients, together with such an account of the symptoms as could be obtained, and the appearance of the chest. In some of the cases evidence was obtained from a post-mortem examination; and in a few cases the pleurisy had occurred when the patients were under my observation.

The facts pertaining to the relation of pleurisy to the development of the tuberculous affection, in the 22 cases, are as follows: The tuberculous affection appeared to follow the pleurisy, either immediately or quickly, in 11 of the 22 cases, precisely one-half. In the remaining 11 cases, the pleurisy had preceded the persistent cough for periods varying from 4 years to several months. The interval was 4 years in one case only. It was 3 years in 3 cases. It was noted as "several years" in 1 case. It was 2 years in 2 cases. It was 1 year in 2 cases. It was noted as "several months" in 1 case; and in 1 case it is simply stated that two attacks of pleurisy had preceded the cough.

In 4 of the cases in which the persistent cough followed immediately, the pleurisy was attributed to an injury of the chest by a blow from the handle of a plough.

It is noted in six cases that the pleurisy was acute, and in seven cases the disease was chronic,—the notes being defective with reference to this point in the remaining cases.

We are certainly warranted by these facts in concluding that pulmonary tuberculosis is rarely preceded by pleurisy. Twenty-two instances make a small proportion out of several hundred cases. It is also a warrantable conclusion, that in some of these twenty-two cases there was no pathological connection between the pleurisy and the tuberculosis. Out of several hundred persons affected with any disease, or persons in good health, a certain proportion would be found to have had pleurisy within a period of four years. Some allowance is therefore to be made for mere coincidence. It is perhaps fair to conclude, that, of the eleven cases in which the persistent cough did not follow either immediately or quickly, the pleurisy, at least in several instances, had no etiological influence. On the other hand, excluding these eleven cases, in the remaining eleven cases in which a persistent cough did follow either immediately or quickly, a pathological connection is to be inferred. In a very small proportion of cases, therefore, pleurisy seems to stand in a causative relation to pulmonary tuberculosis, and yet there is room for the supposition that, in these cases, the causative relation is the reverse of this. The tubercles first formed may be seated at the superficies of the lung, and the pleurisy may be in consequence of their production. The pleuritic effusion having the effect of arresting for the time the progress of the tuberculous affection, the symptoms denoting the latter may not appear until after more or less absorption of effused liquid has taken place. This is, perhaps, the most rational view of the etiological relation between

pulmonary tuberculosis and pleurisy, when the latter is apparently an antecedent disease.

Pneumonia—meaning thereby the ordinary lobar form of pneumonic inflammation—is noted to have occurred, as an antecedent disease, in only nine cases. This very small number of cases is in striking contrast with an opinion which seems to be current with physicians, namely, that pulmonary tuberculosis is apt to originate in an attack of pneumonia. This opinion is certainly not sustained by clinical experience. Even in the nine cases in which pneumonia preceded, the interval between an apparent recovery from the pneumonic and the development of the tuberculous affection renders it probable, if not certain, that there was no pathological connection between the two diseases. In one case this interval was four years. In one case it was two years. In one case it was six months. In the remaining six cases the tuberculous affection appeared to follow either immediately or quickly the attack of pneumonia. Assuming that in these six cases, or even in all the nine cases, there was a causative relation, the result of this analysis certainly warrants the conclusion that the danger of acute lobar pneumonia being followed by tuberculous disease is extremely small.

This conclusion is corroborated by clinical experience from another standpoint, namely, an analysis of recorded cases of pneumonia with reference to the occurrence of pulmonary tuberculosis as a sequel. In 1861, I prepared a "Clinical Report on Pneumonia, based on an analysis of one hundred and three cases."* These cases I had recorded during the preceding twelve years. In not one of these cases was it noted that tuberculosis followed the pneumonia. It is true, that, in a considerable number of the cases which recovered, the patients passed from observation shortly after recovery; but had the pneumonia ended in tuberculous disease, the fact would surely have been embraced in the record, and so, also, if tuberculosis had been developed shortly after the termination of the pneumonia.

That pneumonia has little or no influence in the etiology, is further shown by a fact established by the numerical researches of Louis; namely, that when persons already tuberculous are attacked with pneumonia, the termination is generally in recovery. This fact was corroborated by my analysis. In seven of my cases, the patients affected with pneumonia were tuberculous; and in all these cases, save one case, recovery took place. In the excepted case the lungs were found, after death, crowned with miliary tubercles. It was a case of acute tuberculosis.

As with pneumonia, so with pleurisy; an analysis of cases of the latter disease sustains the conclusion to which I have been led respecting its influence in the etiology of pulmonary tuberculosis. An analytical study of recorded cases shows tuberculosis to be a rare sequel. In 1852, I prepared a "Clinical Report on Chronic Pleurisy, based on an analysis of forty-seven cases."† Of these forty-seven cases, in three the subsequent development of tuberculosis was probable, although not demonstrated; and in one case only the occurrence of this disease as a sequel was certain. Of fifty-three cases analyzed with reference to this point by Dr. Blakiston, not one became phthisical during the lapse of several years after recovery from the pleurisy.‡ The effect of chronic pleurisy with effusion, in a person already tuberculous, is, as is well known, to arrest for a time, or retard, the progress of the tuberculous disease.

I should add, in eight cases the histories showed that, immediately or shortly before the tuberculous disease, there had occurred some acute affection within the chest, the character of which was not determinable by the information obtained from the patients.

I come next to inquire respecting the occurrence of *bronchitis* as an antecedent disease. And, to avoid misapprehension, let me state that my inquiries will relate to bronchitis having the characters of a primary affection, namely, an inflammation of the bronchial mucous membrane, either acute or subacute, affecting the bronchial tubes about equally on both sides, that is, bilateral, extending more or less along the tubes, generally preceded by coryza, and not unfrequently by subacute laryngitis. As thus described, the affection embraces cases of so-called pulmonary or bronchial catarrh—a term which I cannot but regard as superfluous and objectionable. In popular parlance, the affection is known as a "cold in the chest." Now, do my cases show that this affection enters into the etiology of pulmonary tuberculosis?

Of 112 cases, the histories contain information bearing on the foregoing question. This information relates to the cough, as regards severity, and the absence of expectoration at first, and during a greater or less period. In only one case is it noted that, according to the patient's statement, there was expectoration with the commencement of cough. In one case there was no cough when the patient first came under my observation, the only ailment complained of being debility, while physical exploration gave unequivocal evidence of the tuberculous disease, which ended fatally. In only two cases is it noted that the patients were subject to frequent attacks of bronchitis, or, using their language, especially liable to "take cold," prior to the development of the tuberculous disease. In 72 of the cases, the cough was stated to have been at first, or for some time, without expectoration, that is, dry. In the great majority of the histories it is simply noted that, either at first or for some time, the cough was dry. In 39 of the 112 cases, nothing is noted with reference to this point. The duration of the dry cough was noted in 17 cases, as follows: Several months, 6 cases; eight months, 1 case; six months, 2 cases; four months, 2 cases; two months, 1 case; one month, 1 case; several weeks, 1 case; three weeks, 1 case; "a long time," 1 case, and a "considerable period," 1 case. In 74 of the cases the cough is noted to have been at first, or for some time, slight. The fact simply of the cough having been at first, or for some time, slight, is noted in 57 cases. In 17 cases, the length of time during which the cough was slight is noted as follows: "Several months," 5 cases; "several years," 1 case; "many months," 1 case; eight months, 1 case; six months, 1 case; four months, 1 case; three months, 1 case; one year, 2 cases; six weeks, 2 cases; one month, 1 case; and three weeks, 1 case. In 4 cases the cough was at first violent, in one of the cases being compared to whooping-cough; but in all these cases it was at first, and for some time, dry. In 34 of the 112 cases, nothing is noted respecting the cough being at first either slight or severe.

In a considerable number of my cases,—or, to be precise, in 39.—I have noted that the patients attributed the disease to "taking cold." In several of these cases the commencement of cough was dated from some particular exposure, such as being out of doors in inclement weather, or getting wet. It is needless to say, that statements in this regard have little or no value, since it is well known to be a popular notion

* Vide *American Journal of Medical Sciences*, Jan., 1861.
† Vide *Buffalo Medical Journal and Monthly Review*, Nov., 1852.
‡ Vide *Practical Observations on Certain Diseases of the Chest*. Republished by Lea and Blanchard in 1843.

that all affections of the chest, as well as a host of other affections, originate in a "cold." I presume no one will take exceptions to my considering the opinion of patients with reference to this point as of no weight in determining the existence of an antecedent bronchitis.

What is the conclusion to be drawn from the facts contained in my histories? Evidently, the conclusion is, they contain no evidence whatever that bronchitis has a causative influence in the development of pulmonary tuberculosis. With a single exception, in no instance do the characters of the cough, at its commencement, show that bronchitis existed as an antecedent affection. On the other hand, the histories, as regards the early pulmonary symptoms, go to show that they were incidental to the tuberculous disease. The evidence of this is in the slightness and the dryness of the cough at first and for some time, or, in not a few cases, for a considerable or a long period afterward. These facts are inconsistent with a primary bronchitis. If, as in the consideration of pleurisy and pneumonia, we take as a stand-point cases of bronchitis, either acute, subacute, or chronic, and inquire how often does pulmonary tuberculosis occur as a sequel, we must answer the question, not by figures, but by impressions founded on unrecorded experience. I cannot refer to a collection of recorded cases of bronchitis. But it is well known how common are cases of this affection. Now, I put this question to medical practitioners: Whenever you have no reason to doubt that a patient has only a bronchitis, either acute, subacute, or chronic, do you entertain apprehensions that this patient will become tuberculous as a consequence of the bronchitis? Taking statistical data embraced in the recorded histories of cases of bronchitis with reference to the occurrence of tuberculosis as a sequel, there is no alternative to this appeal to experience not based on the analysis of recorded cases. I think there is hardly room for doubt as to the answer to this question. Let a physician be satisfied that his patient has nothing more than a bronchitis, or a "common cold," and he feels no anxiety as to danger of consumption. Let it be decided that cough and expectoration, however protracted, be the symptoms of only a chronic bronchitis, and there may be danger of asthma and emphysema, but phthisis is not to be apprehended. I have, as I believe, in this way expressed the sentiments of the great majority of the experienced practitioners with whom it has been my fortune to be brought into professional relations.

The conclusion which I have drawn, from the analysis of my cases, respecting the etiological influence of bronchitis, is not in conformity with some late teachings by a German school, of which Niemeyer was the exponent. Niemeyer inculcated the doctrine that bronchitis not unfrequently leads to pulmonary consumption. He says: "A simple genuine catarrh may extend into the air-vesicles in a person of apparently perfect health and vigor," and "healthy men should never feel sure that they will not die of an acute or chronic catarrhal pneumonia (*i. e.* of phthisis) proceeding from a cold." Again, "Numerous examples exist in the practice of every experienced physician, in which the cough has commenced on some particular day following a severe cold, soon after which the other symptoms of consumption have made their appearance."* He inculcated this doctrine as having an important influence on the treatment of consumption. Indeed, he proposed as a name for the so-called tuberculous infiltration,—that is, the ordinary form of pulmonary tuberculosis,—"chronic catarrhal pneumonia," with express reference, as he stated, to the influence on measures of prophylaxis and therapeusis.

I shall not here discuss this doctrine on the ground of its inconsistency with well-known pathological facts, such as the frequency of bronchitis in childhood and in old age, periods of life when the development of phthisis is relatively rare; the fact that for bronchitis to extend into the bronchioles it must be of the variety known as capillary, and this variety is exceedingly rare during the period of life when phthisis is most apt to occur; the improbability of bronchitis, which is a bilateral affection, giving rise to the "catarrhal pneumonia," *i. e.*, infiltrated tubercle, on one side only, for a considerable period before the affection occurs on the other side; and, finally, regarding the tuberculous infiltration as a variety of chronic pneumonia, the fact that a bronchitis, however acute, and even when it affects the smaller tubes, has no tendency to give rise to an acute pneumonia. Waiving a discussion into which these and other facts would enter, I will simply raise the inquiry, How is the doctrine that pulmonary consumption, as stated by Niemeyer in another quotation, "arises, with rare exceptions, through extension of a chronic catarrh into the finer terminal bronchioles, and thence into the pulmonary vesicles," to be either proved or disproved? The answer to this question is plain. The doctrine is to be either proved or disproved by direct clinical observation; that is, determining, by an analysis of a sufficient number of recorded cases, whether pulmonary tuberculosis often, or rarely, commences with, or is preceded by, bronchitis. Niemeyer did not claim to have himself studied cases in this way, nor did he base the doctrine on the studies of others. His assertions, therefore, dogmatic as they are, have only the value of an opinion resting on conjecture or on theoretical reasoning.

I should have more reserve, perhaps, in referring thus to Niemeyer, if my own clinical studies in relation to the causative influence of bronchitis stood alone. It is now nearly fifty years since the publication of Louis' Researches on Phthisis.* He studied eighty carefully recorded cases with reference to antecedent affections. His conclusion was, that "pulmonary catarrh," *i. e.*, bronchitis, as also pneumonia and pleurisy, rarely, if ever, entered into the etiology of phthisis.

The great man just named has but recently been called to the sphere which lies beyond our present life. His work on phthisis, was, I believe, the first which exemplified the numerical method of investigation, of which he was the founder. Then followed his great work on the typhoid affection. No stronger evidence of the value of the method of study which he inculcated and practised can be adduced than this: nearly all his conclusions have been confirmed by the researches of others who have repeated his labors; and, remaining to-day more firmly established than at first, they will so continue forever, unless, with the lapse of time, diseases undergo material changes. This is not an occasion to pronounce a panegyric upon his life and labors. Let me add, that were this to be done on a fitting occasion, by a competent eulogist, it would not only be an act of justice in honor of the memory of one, than whom few have rendered to medicine greater service, but it would be useful by inciting enthusiastic minds to follow his example, and

* *Text-book of Practical Medicine*, seventh edition. Translat on by Drs. Humphreys and Hackley.

* *Recherches Anatomico Pathologiques sur la Phthisie* Par Ch. A. Louis. Paris, 1825.

engage in the method of study which he inaugurated.

As an antecedent event, hæmoptysis is now to be studied.

This event occurred prior to the commencement of a persistent cough in fifty-six cases. In eighteen cases persistent cough, with other evidence of the existence of tuberculous disease, followed immediately a hæmoptysis. In thirty-seven cases hæmoptysis occurred once or repeatedly, cough and other evidence of tuberculous disease following after an interval of greater or less length. The length of the interval varied much in the different cases.

It is noted in one case to have been sixteen years; in one case fifteen, and again four years; in one case ten years; in one case six years; in one case four years, and, in this case, there were several recurrences of the hemorrhage; in two cases three years, in one of which repeated attacks occurred; in one case two years, and there were three successive attacks; in two cases two years; in two cases one year; in five cases several months; in one case six months; in two cases four months; in one case two months; in one case eight months; in one case five attacks during three months, persistent cough following the last attack; in two cases two attacks with an interval of a month between the two, and persistent cough following the last attack. In the remainder of the cases the interval is not specified. In sixteen cases it is noted that the hæmoptysis occurred when the person affected appeared to be in perfect health. In a few cases the hæmoptysis followed some unusual muscular exertion; but, in most of the cases, no apparent exciting cause of the hemorrhage is noted.

It is noteworthy that the development of pulmonary tuberculosis was preceded by hæmoptysis in such a considerable number of cases. The number of cases in which pulmonary tuberculosis became developed many months and years after the occurrence of hæmoptysis, is also worthy of note. In this latter point of view, the facts go to show that hæmoptysis is to be considered a forerunner of phthisis, albeit the tuberculous affection may be long delayed. Ware's valuable analysis of 386 cases of hæmoptysis, noted in private practice during a period of about forty years, showed that in sixty-two cases the patients were afterward known either to be living in ordinary health, or to have died of other diseases having no connection with the existence of tubercles, the length of time during which this immunity continued varying from two to thirty-seven years.* Doubtless in more or less of these cases, tuberculosis existed when the hæmoptysis occurred, the patients recovering from the tuberculous affection. Of the cases in which tuberculosis did not coexist, judging from the facts developed by my analysis, it is probable that some became tuberculous after the date of the analysis of the cases, and also that tuberculous disease would have probably occurred in some of the cases had not the persons been taken off by other diseases. Moreover, the hæmoptysis may in some of the cases have denoted a tendency to tuberculous disease which, from age or the operation of prophylactic influences, did not become developed.

One conclusion, then, to be drawn from the results of my analysis is, that, whenever hæmoptysis is not evidence of an existing tuberculous affection, it has significance as a prodromic event. Another conclusion is, that hæmoptysis is not a cause of phthisis, as was asserted by Niemeyer. This is a fair inference from the fact, that in only about one-third of the cases in which hæmoptysis occurred as an antecedent event, was it immediately followed by the evidence of tuberculous disease, an interval of weeks, months, or years elapsing in two-thirds of the cases.

Regarded in the light of a prodromic event, hæmoptysis has of course some pathological connection with the development of tuberculous disease. The nature of the pathological connection, our present knowledge does not enable us to understand. It is not an inconsistent, if, indeed, it be not a rational supposition, that, in certain cases, the occurrence of bronchial hemorrhage, so far from being a cause of, is a substitute for, the local processes involved in the production of tuberculous disease. This supposition is in harmony with a fact which Ware's statistics established, namely, that hæmoptysis, occurring *after* the development of tuberculous disease, is of favorable import, as regards either the arrest or the retardation of the progress of the tuberculous disease.

With regard to antecedent diseases other than those affecting the pulmonary organs, an analysis of my cases furnishes the following facts:—

Intermittent fever is noted in twenty-five cases, exclusive of those in which it is not certain whether the paroxysms were malarial or incidental to the tuberculous affection. In seven cases the tuberculous affection is noted to have become developed immediately after an attack of intermittent fever. In four cases the symptoms of the tuberculous affection occurred during the continuance of intermittent fever. In five cases it is noted that the tuberculous affection followed soon after intermittent fever; and in four cases it is simply noted that intermittent fever preceded the tuberculous affection. In these twenty cases, the two diseases were in close chronological connection. Of the remaining five cases, it is noted in one case that intermittent fever preceded with an interval of several months; and in one case, simply that the patient was subject to intermittent fever. In three cases, intermittent fever had occurred frequently during, in one case, the preceding year, in one case the preceding five months, and in one case the preceding three months. These facts do not go to support an opinion heretofore held by some, that malarial toxæmia affords a security against tuberculous disease.

Measles is noted as an antecedent disease in six cases. In two of these cases, persistent cough dated from the attack of measles; in one case six months, in one case one month, and in one case five years elapsed between the measles and the development of the tuberculous affection.

Dyspepsia is noted in five cases. In one case it had existed for fifteen years; in one case for several years; in one case for a year; in one case for several months; and in one case its duration is not noted.

Diarrhœa is noted in three cases. It had existed in one case for four months; in one case for a month; and in one case the duration is not noted.

In three cases the patients were subject to attacks of rheumatism; and in one case the tuberculous disease immediately followed rheumatism which had existed for three months.

Perineal fistula preceded the pulmonary disease in four cases. In one of these cases the fistula had been nearly cured nine months before the first symptoms of tuberculosis of the lungs. In one case it preceded a second occurrence of pulmonary tuberculosis, the patient having, apparently, recovered from phthisis four years previously. In one case an operation had been performed for the cure, but without any success. In the remaining case the fistula occurred a year before

* *On Hæmoptysis as a Symptom*, by John Ware, M.D., etc. Publications of the Massachusetts Medical Society, 1860.

the development of tuberculous disease of the lungs, and was cured by a surgical operation.

A scrofulous affection of the glands of the neck was noted in three cases. In one of these cases the cervical glands had been swollen two years before the development of the pulmonary tuberculosis. In another case, suppuration of these glands had taken place a year previously, and there were present the characteristic cicatrices, the age of the patient being 24. In the remaining case there had been suppuration of these glands, leaving characteristic cicatrices, when the patient was 14 years of age; the age when the case came under observation with pulmonary tuberculosis being 34 years.

In five cases it is noted that the patients had had syphilis; but it is quite certain that in many, if not most of the cases, inquiries were not directed to this point.

In one case bronchocele had existed, and a cure was effected by iodine, a year before the occurrence of phthisis.

One patient had been affected for a long time with psoriasis.

One patient had had parotiditis shortly before the development of the tuberculous disease.

In one case the tuberculous disease followed shortly after recovery from small-pox; in two cases shortly after typhoid fever; and in one case, shortly after yellow fever.

In four cases it is noted that the health was impaired prior to the tuberculous affection, but without any well-defined disease.

In one case dysentery preceded, for a short period, the tuberculous affection.

One patient had had urinary calculi.

In one case there had been three operations for the removal of recurring fibroid tumor of the neck.

In one case the tuberculous affection was preceded by suppurative inflammation of the ankle, and also disease of the hip.

In one case the affection was developed in a patient with diabetes mellitus; and in one case in a patient with Addison's disease.

To extend the analysis to other points would be, perhaps, to presume too much upon the attention of my auditory; and in bringing this paper to a close, I submit a series of propositions embracing a recapitulation of certain facts, together with some deductions relating to the etiology of pulmonary tuberculosis.

1. The results of my analysis show that the varied occupations of life favor the production of the disease in so far as they involve confinement within doors and sedentary habits. My collection of cases contains no evidence of the etiological agency of the inhalation of dust, particles of stone, of metal, or any matter giving rise to local irritation; on the contrary, there is a remarkable absence of occupations involving exposure to irritating inhalations. The number of occupations represented by only two, three, or four cases, and by a single case, affords evidence that an etiological agency derived from this source relates exclusively to sedentary habits and confinement within doors.

2. Inflammatory affections within the chest, namely, pleurisy, pneumonia, and bronchitis, have very little if any causative influence in the development of the disease.

3. Hæmoptysis, when it is not a symptom of existing pulmonary tuberculosis, should be considered as having the significance of a prodromic event; but there is no clinical evidence of its standing in a direct causative relation to the disease.

4. The absence, in my collection, of any cases in which asthma, emphysema, and organic affections of the heart were antecedent affections, may be noticed as sustaining the opinion that these affections are antagonistic to the liability to pulmonary tuberculosis. Here I refer to "negative facts," and they are subject to the qualification stated at the beginning of this paper; but it is certain that, in the considerable number of cases in which the previous health was noted, if these affections had existed, their existence would have entered into the records.

5. Of the antecedent "general diseases," the number of instances in which intermittent fever had existed might perhaps lead to the conclusion that malaria is to be reckoned among the causes of pulmonary tuberculosis. But when it is considered that nearly all my cases were observed in sections of country more or less malarious, a large allowance is to be made for mere coincidence. Hence, that malaria does not protect against tuberculous disease, is the only deduction admissible.

With regard to other essential fevers, namely, measles, small-pox, typhoid fever, and yellow fever, the number of cases in which these diseases existed antecedently is so small as to afford little, if any, evidence of an etiological influence referable to them.

6. My cases afford no evidence that scrofula (meaning by this term an affection, a distinctive feature of which is enlargement and suppuration of the cervical glands, leaving characteristic cicatrices) enters into the etiology of pulmonary tuberculosis.

7. The results of my analysis go to show that, aside from the diseases named in the foregoing propositions, there are none which are to be considered as involving a special tendency to the subsequent development of pulmonary tuberculosis. Twelve additional diseases only appear in my records. Of these twelve diseases, eight are severally represented by a single case. Those which are represented by more than one case are dyspepsia, perineal fistula, syphilis, and rheumatism. The number of cases representing these four diseases is altogether too small to give evidence of a causative relation. There is no evidence, derived from my analysis, to sustain the hypothesis of Niemeyer, which attributes the production of miliary tubercles to the absorption of morbid products in different parts of the body.

In conclusion, the result of my analysis, in so far as it has extended, sustains the doctrine that pulmonary tuberculosis is eminently a diathetic disease; that is, it arises from an internal or constitutional determining agency which it has been customary to designate a diathesis. Assuming this to be a correct conclusion, it would be unprofitable to speculate concerning the essential nature of the diathetic condition. Taking, however, this conclusion as a point of departure, it remains to determine, by clinical studies, the causes of the tuberculous diathesis. As regards this object, there are various points of inquiry, prominent among which are questions concerning habits of life, congenital disposition, hereditary influence, and, perhaps, contagion. I reserve an analysis of my cases with reference to these and other points for some future occasion.

Through an unintentional error, my paper was announced in the printed notices, as a "Contribution to the Pathology of Tubercle." Etiology is, indeed, a department of pathology; but, more than this, etiological doctrines must, almost of necessity, affect those which pertain to the pathological character of diseases. At this moment there is a conflict of opinions re-

specting the doctrine just stated. That pulmonary tuberculosis involves a special diathesis, innate or acquired, has been until quite recently the prevailing opinion. The tendency of the so-called "new views of tuberculous disease," emanating from our German brethren, is to depreciate the diathetic character of this disease. According to these views, the development of pulmonary tuberculosis is due largely, or chiefly, to extrinsic causes acting directly upon the lungs, or to morbid conditions seated in these organs. This conflict of opinions is not merely one of pathological interest; the question is one fraught with practical consequences. Our rational views respecting the prophylaxis and the treatment of pulmonary tuberculosis cannot but be affected in no small measure by the degree of importance which we attach to its diathetic character. The pathological question is one which concerns the practice as much as the principles of medicine. Giving due weight to this consideration, let us not permit our minds to be unduly biased, on the one hand, by an obstinate determination to adhere to a doctrine because we may have already adopted it, nor, on the other hand, by the attractiveness of novelty, or a feeling that what is new necessarily denotes actual progress in knowledge. The truly philosophical course evidently is to consider well the means of investigation by which the question is to be settled, and to aim at a correct conclusion without regard to either past or present opinons.

A CASE OF LONGITUDINAL FRACTURE OF PATELLA.

By C. T. POORE, M.D.,

NEW YORK.

M. L———, an actress, about 25 years of age, while attempting to spring from a bar, twenty feet from the stage of a theatre, fell, and a net which was arranged to catch her in such a case partially broke her fall, but her right leg was thrown violently out on the stage. She finished her acting, which called for considerable muscular effort, and was able to walk home, a distance of half a mile, although suffering considerable pain.

The next day she was able to limp about the house. Her physician saw her, but could detect scarcely any swelling or pain about the knee-joint, but she complained of some pain, and a grating sensation, when she attempted to flex her knee in walking. There was a contused wound over the upper border of the right patella, just on the inner side of its median line, as though it had struck on some blunt object.

I saw her, in consultation, three days after the injury. Patient limped into the room, and said she did not suffer much pain, except on bending the knee.

On inspection, there was no difference between the right and left knee, either in color or in size. Careful examination failed to detect any heat or tenderness about the joint. She complained of considerable pain on pressure over the outer half of the patella, as though it had been bruised. On grasping the bone, and moving it laterally, but little pain was felt, and no crepitus could be detected, nor was there any unevenness of surface. On grasping the outer portion of the bone with one hand, and the inner with the other, and making alternate motion, in a longitudinal direction, distinct crepitus could be felt and heard, and on depressing either side of the bone a slight fissure could be felt, running from a point just outside of its middle, on its upper border, downwards, and slightly inwards to its lower and inner border. When the leg was extended she complained of no pain, but flexion of the leg on the thigh gave distress. There was evidently a longitudinal fracture of the right patella, without any laceration of its fibrous covering, and without any injury to the knee-joint. Not having had charge of the case, I am unable to give the result, but her physician informs me that she has good use of the limb.

Vertical fracture of the patella is a rare injury, if we may judge from the literature of injuries to that bone.

Hamilton,* in his work on Fracture and Dislocations, mentions the fact that longitudinal fractures have occurred, but has never seen one, nor does he mention any case. Lonsdale mentions having seen a case of this fracture, but gives no particulars. He also refers to four specimens in the Museum of Middlesex Hospital; in two of these there was bony, and in two ligamentous union.

Sir Astley Cooper records two cases of this fracture. In one of these a quarter, and in the other a third, of the patella was broken off. In one case there was no attempt at union; the other was united by ligament. He also found a longitudinal fracture of both patellæ in a subject in the dissecting-room of St. Thomas' Hospital, and although the fragments were in contact, they were only united by ligament.†

Dupuytren mentions five cases of vertical fracture of the patella; four were caused by a fall from a height, and one from being run over by a wheel. In one case the bone was divided into two equal parts; in three the fracture was not in the median line of the bone, and one was fractured diagonally. In two cases there was no separation of the fragments; three were united by callus, two proved fatal on the twentieth day after the injury, one on the third day, the other from other causes.‡

FIBROID TUMOR OF THE UTERUS ABSORBED DURING PREGNANCY.

By R. C. M. PAGE, M.D.,

NEW YORK.

Mrs. P———, æt. 26 years, a housekeeper by occupation, and married for seven years. She first menstruated at the age of fifteen, and was quite regular in time and quantity, the flow lasting about four days, and free, though moderate in quantity, without pain, until about one year after marriage, at which time it disappeared for eight weeks, when suddenly, and without any apparent cause, it came on profusely, and lasted for thirteen weeks altogether. After that the flow recurred every two weeks, and would last for eight or ten days, being at the same time quite profuse, and ending in an abundant hemorrhage. About the month of March, 1872, she began to enlarge about the abdomen. This condition continuing, she applied to me, while House Surgeon of the Woman's Hospital, for admittance to that Institution on the 19th December, 1870. She was, at that time, examined by myself and Dr. Thomas Addis Emmet, the surgeon-in-chief of the Hospital, but had to be sent home, as there was no vacancy at the time. The anterior wall and fundus of uterus was found to be very much thickened, and the organ extending up as far as the umbilicus. The uterine cavity measured six and a half inches in depth, and the os patulous. She suffered no pain or other trouble, but was very anæmic, and she had now more or less

* Fract. and Dislocations, London, 1868.
† Cooper on Fracture and Dislocations, Boston, 1825.
‡ Dupuytren, translated by Doane, New York, 1823.

flow of blood all the time. Auscultation revealed a bellows murmur at the base of the heart, with the second sound, which proved to be due to her anæmic condition. As the patient was very poor, and did not live far from the Hospital, I was requested by the surgeon-in-chief to attend her at her home, with a view to getting her into the Hospital should a vacancy occur in the free ward. I accordingly visited her, and by means of tr. iodine applied to the *fundus uteri* occasionally, together with the tampon, I checked the menorrhagia, and in a few months succeeded in restoring the menstrual function to its normal condition. She was also put upon iron, and in six months the cardiac murmur disappeared also. After leaving the Hospital, my term of service having expired in April, 1871, the patient continued under my care. She came to my office twice every week to have applications of carbolic acid and glycerine, equal parts, applied to the *fundus uteri* in order to check the leucorrhœa which she had, and to guard against a return of the menorrhagia. The following June, however, as she appeared to be so well, I discharged her, with the advice to notify me at once should hemorrhage recur. The latter part of July she had her period as usual, but, much to her surprise and uneasiness of mind, it did not return in August; in short, it soon became evident that she was pregnant. In the early part of May, 1872, she was delivered of a fine boy without any difficulty. In July last I examined her, with Dr. J. H. Ripley, and we found the uterine cavity measuring *two and a half inches in depth*. The abdomen, which at the examination by myself and Dr. Emmet, in December, 1870, was *flat* upon percussion as far up as the umbilicus, was now *tympanitic*, and by bimanual manipulation the uterus could only be felt behind the symphysis pubis by firm pressure, as in any case where the uterus is of normal size. No fibroid tumor of the uterus therefore now existed, for the organ appeared to be of normal size by every method of examination. The conclusion arrived at, therefore, was that the large fibroid tumor, *which existed beyond a doubt before*, had, *during pregnancy, been absorbed by pressure of the fœtus*, and been *entirely removed* in the retrograde development of the uterus. The patient is now (January 3d, 1873) in excellent health and condition, having recently recovered from the operation for *fistula in ano*, which I performed early last month.

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Progress of Medical Science.

Ovariotomy by Enucleation.—Dr. J. F. Miner, Surgeon to the Buffalo Gen'l Hosp'l (*Am. Jour. Med. Sciences*), publishes more cases of ovariotomy by enucleation, without clamp, ligature, or cautery, and believes that all ovarian tumors capable of removal can and should be removed by the method proposed, with advantages so manifestly superior as to commend it for trial before resorting to any other plan.

Impacted Fracture of Neck of Femur.—Dr. McGraw (*Michigan University Medical Journal*), at the last meeting of the Michigan State Medical Society, presented a specimen of impacted fracture of the neck of the femur, removed thirty-eight years after its occurrence. The patient, now 54 years of age, was injured by a bank of earth falling upon him when 16 years old. Though he acquired full and complete use of both limbs, the effects of the injury had always remained visible in a marked eversion of the left foot and a slight eversion of the right one. On account of obstinate recurrent sarcoma of the thigh, amputation at the hip-joint was recently and successfully performed. The patient made a good recovery. One of the interesting features of the case was the opportunity it afforded of examining a specimen of impacted fracture thirty-eight years after its occurrence. The head of the bone was evidently thrust down between the trochanters, so that the great trochanter rose above it. It was also twisted so that a portion of the neck was brought to bear against the edge of the socket. This stimulated a new growth of bone, so that the head, as it appeared in the specimen, was very much elongated and enlarged. The acetabulum was altered in shape to correspond. The femur was slightly everted.

Pneumothorax.—D. T. Gilliam, M.D., Nelsonville, Ohio, (*Clinic*, Sept. 28, 1872), records a case of this infrequent affection, without pleuritis, ending in recovery. He rejects the opinion that metallic tinkling arises from drops of fluid falling into a liquid contained in a cavity. 1st. Because he cannot conceive of a circumstance so fortuitous, occurring with so much regularity and definite exactness, as in this case. 2d. Because the character of the sound, after the first day, could by no stretch of the imagination be made to resemble the sound produced by the dripping of one fluid into another. 3d. Because he was satisfied that the pleural cavity contained no fluid, and hence the phenomena could not be produced by a cause that did not exist. The sound presented in its greatest intensity, and was referable to a point corresponding to the spot where the patient experienced the most pain.

Retroversion of the Unimpregnated Womb.—A. Reeves Jackson, M.D., Surgeon-in-Chief of the Woman's Hospital, State of Illinois (*Chicago Med. Journal*, Oct. 1872), in a paper read before the Chicago Society of Physicians and Surgeons, on this subject, thus summarizes: 1st. Chronic retroversion of the womb, unaccompanied by structural disease, is of rare occurrence, and may be regarded as a harmless disorder. 2d. The distressing symptoms usually attributed to retroversion are dependent upon complications involving structural change, as engorgement, inflammation, retroflexion, etc., rather than upon the displacement itself. 3d. These complications are to be regarded as primary in point of time, as they are in pathological importance. 4th. The treatment should have reference, first, to the removal of the structural lesion; and secondly, to the replacement of the organ and its retention by appropriate means. He would suggest that the best time for replacing the organ, after the tenderness and heaviness have been sufficiently reduced, is just prior to a menstrual period. If the operation be carefully performed, and great caution exercised during the time of flow, it will occasionally be followed by permanent relief. The catamenial period determines a reparation and renewal of uterine tissue which supply a valuable aid in the treatment of most of the disorders of the organ.

Amputation of the Knee-Joint.—Henry Gibbons, Jr., M.D., San Francisco, Cal., (*Pacific Med. and Sur. Jour.*, Sept. '72), reports a case of successful knee-joint amputation, in a lady forty-six years of age, who had long suffered from tuberculosis of the left ankle-joint. The leg was first amputated in the lower part of the middle third, by the circular method. After many discouraging attempts were made to accomplish a cure, the patient submitted cheerfully, months after the first operation, to the latter amputation. Forty-

six days after the operation the wound was entirely well. On examination a good stump was disclosed. The patella fitted in nicely between the condyles, and made a finely rounded end, in nowise intolerant of pressure, while the cicatrix being on the posterior surface, and from two to three inches above the extremity, was entirely removed from the effects of chafing or pressure.

He calls attention to the excellent tables of cases collected by Drs. Bruton and Markoe, with the results.

Hay Fever.—Morrill Wyman, M.D., in his work on "Autumnal Catarrh (Hay Fever)," advocates in the asthmatic stage, the smoking of stramonium, also the espic cigarette. The composition of each cigarette is as follows:

℞ Belladonna leaves, 4½ grs.; hyoscyamus, 2¼ grs.; stramonium, 2¼ grs.; phellandrium aquaticum leaves, ¾ grs.; opium, ½ grs.

Relation of Hæmoptysis to Pulmonary Consumption.—In a translation by Hamilton Osgood, M.D., of a portion of Niemeyer's monograph on "The Relation of Hæmoptysis to Pulmonary Consumption," written about fifteen months previous to his death (*Phil. Med. Times*, October 19, 1872), the author defines his views concerning the relation of capillary, bronchial, and pulmonary hæmorrhage to consumption of the lungs, in the subjoined propositions: 1st. By no means all individuals who suffer from capillary, bronchial and pulmonary hemorrhage are, or become, consumptive. 2d. Not unfrequently, consumption of the lungs follows capillary hemorrhage of the lungs and bronchia, without the existence of a genetic connection between the hemorrhage and the pneumonic processes which, as a rule, form the origin of the phthisis. The same individuals who are predisposed to these hemorrhages, are also disposed to the inflammatory processes. 3d. Capillary, bronchial and pulmonary hæmorrhages frequently lay the foundation of phthisis in persons in whose lungs neither tubercle nor pneumonic products exist; and the reason for this is, that the blood which is retained in the alveoli of the lungs, and the inflammatory products which are called forth by the same, undergo cheesy metamorphosis. 4th. In the same manner, bronchial and pulmonary hemorrhages not rarely hasten the course of an already existing phthisis. 5th. In individual and rare cases, hæmoptysis is not the cause, but the *consequence*, of pneumonic processes, which in their protracted course lead to pulmonary consumption. Such cases are easy of recognition, because commonly severe fever and other indications of inflammation accompany or precede the hæmoptysis. 6th. The blood which remains in the alveoli, and which, together with the pneumonic infiltration, has become cheesy, sometimes causes an eruption of miliary tubercle.

Destruction of the Kidney by Suppuration.—A. Fisher, M.D., Chicago, Ill. (*Chicago Med. Examiner*, October 1, 1872), relates a case of destruction of the kidney by suppuration, the patient being a male, aged 47 years, who, during the past sixteen years, has had frequent attacks of pain in the left kidney, with difficulty in urinating. The history of this case shows that suppuration of one kidney may be so chronic and insidious in its progress, that the ordinary symptoms which characterize an abscess of that organ may be entirely wanting. It also proves that a person can live with one sound kidney; for after the abscess was opened, he improved steadily until it opened into the thoracic cavity from the external opening. After that occurrence he sank rapidly, and died in two or three days.

Fracture of Skull, etc.—J. F. Fitzpatrick, M.D., Civil Surgeon, Kurnool, India (*Madras Med. Jour.*, Jan., 1872), relates the following case, with explanatory cuts:—A police head-constable was savagely attacked by a brother policeman with a heavy native tulwar, with these results: Right side of head and ear severely hacked, there being numerous cuts three to four inches long; parietal bone fractured immediately behind its articulation with the frontal, the fracture extending from the anterior inferior angle, upwards, about three inches, the anterior edge being depressed exactly to the extent of the thickness of the posterior, from which latter two or three fissures passed backwards about one inch. The left eye completely destroyed by a cut which fractured the external angle of orbit. Right shoulder-joint laid open by one clean sweeping cut, commencing beneath the acromial process, dividing all the structures in front and outer side, opening the joint, leaving the vessels and nerves of axilla intact. Index and middle finger of right hand separated at their metacarpal extremities, and the thumb at the first phalangeal articulation, etc.

When reaction had set in, about thirty-six hours after admission, the head of the humerus was freed from its few remaining attachments, turned out, and sawn off immediately below the tuberosities. No vessels were divided. Two pieces of parietal bone were removed when completely loosened. In reviewing this case he was naturally surprised at the miraculous escape: 1st, from the extent of fracture of the skull and its seat over middle meningeal artery, without laceration of the coats of the vessel; 2d, that the arm was almost severed at the shoulder-joint, yet the vessels and nerves of axilla were not divided; 3d, that the ribs could get completely cut through without penetration and injury to internal viscera. Such a combination of serious and aggravated wounds occurring without a fatal termination is, he thinks, seldom seen; yet here is one in which there is perfect recovery, perfect as far as nature and art could possibly accomplish after the mutilation received. A wound laying the shoulder-joint so completely open, and giving an opportunity of practising the conservative power of resection over amputation for primary injury (other than gunshot wounds), is not of frequent occurrence. The treatment of the other injuries was simply on the expectant principle, removing all sources of irritation that might thwart or interfere with the natural curative process.

Veratrum Viride in Pulmonary Hemorrhage.—H. N. Eastman, M.D., of Geneva, New York. (*Buffalo Med. and Surg. Jour.*, employs veratrum viride in pulmonary hemorrhage, when no acceleration of the heart's action is present, for the express purpose of reducing the normal circulation to the lowest point compatible with the safety of the patient, and to distend the pulmonary vessels as little as possible with the incoming blood. The idea is that such prevents farther rupture of the capillaries of the part, and affords an opportunity for the vascular lesions already existing to be obviated, by temporarily reducing the normal circulation.

Glycerine Ointment.—Prof. Chas. A. Joy (*Jour. Applied Chemistry*) gives the following formula for a glycerine ointment, useful in chapped hands and excoriations:—One-half ounce of spermaceti is melted together with a drachm of white wax and two fluid ounces of oil of almonds, by a moderate heat; the mixture is poured into a mortar, when a fluid ounce of glycerine is added to it and rubbed till the ingredients are thoroughly mixed and cold.

Chiccory in Incontinence.—J. H. Thompson, M.D., of Goshen, N. Y. (*Med. and Surg. Reporter*, Sept. 21, 1872), writes that, from observation and experience in the administration of chiccory, he is satisfied that it is a valuable agent in incontinence, the result of atony and relaxation of the sphincter and other muscles.

His knowledge of its efficacy was derived by the accident of observing, in the case of an individual afflicted with incontinence, that the difficulty was markedly alleviated when he used *mixed* coffee, and, *vice versa*, was aggravated when *pure* Java coffee was used as the beverage. Subsequent experience confirms his belief in the efficacy of this agent. He has prescribed to elderly patients, with advantage, a decoction of pure chiccory. He has not had an opportunity of prescribing this remedy in the cases of children.

Diagnostic Symptom in Cerebro-Spinal Meningitis and Myelitis.—Dr. John Brownrigg, of Columbus, Miss. (*Med. and Surg. Rep.*), speaks of a peculiar form of ophthalmia as a diagnostic symptom in cerebro-spinal meningitis and myelitis:—

This form of ophthalmia comes on about the third or fourth day. First one eye is inflamed, while the arm and leg of the opposite side is convulsed. It becomes most marked when paralysis results in the opposite side, indicating the development of myelitis. Then the other eye becomes inflamed, while the opposite side is convulsed, to be paralyzed in its turn. The disease follows this course most frequently in children.

The conjunctiva is first slightly injected, the color gradually deepening until it assumes a peculiar pink shade. At first there is secreted from the conjunctiva a flaky white pus, gradually becoming more fluid, but always very white. The eyeball gradually sinks deep into its socket and becomes flattened. This symptom has often enabled him to distinguish this disease, when in danger of mistaking it for convulsions from other causes, especially in children, when the case has not been under observation in its early stages. The inflammation may be attributable to an extension of the inflammation from the brain along the optic nerve.

Induction of Premature Labor.—It is now 116 years ago since a consultation of physicians was held in London to consider the propriety of inducing labor in certain cases; and Dr. Macauley was the first, in 1756, to perform the operation after the London meeting, by rupturing the membranes.

To show with what ease premature labor can be induced by the placing of a flexible bougie in the uterus, as recommended by late authors, a case is related by Dr. J. C. McMechan, of Cincinnati, O., in the *Med. and Surg. Reporter*, Sept. 14, 1872.

A New Rule for Doses.—E. H. Clarke, M.D., Boston, Mass. (*Boston Med. and Surg. Jour.*), would have the doses of most medicines increased or diminished in the proportion of the weight of the patient to that of number of pounds. This proportion is represented by a fraction whose numerator is the patient's weight and whose denominator is 150. If a child at birth weighs six pounds, the appropriate dose for it would be 6-150 or 1-25; if it weighs ten pounds, 10-150 or 1-15. A child two years old, weighing twenty pounds, would require 20-150 or about 1-7 of an adult dose; or, more precisely, 1-7½, which is exactly half way between the quantity indicated by the table of Gaubius for a child two years old and that indicated by Dr. Young's scheme for the same age. A person whose weight is two hundred pounds should have 200-150 or 1 1-3 of an average adult dose. A child twelve years old, weighing 75 pounds, would require 75-150 or 1-2 of an average dose. The modifications of the average dose, demanded by a patient's idiosyncrasy, disease, and other conditions than age or weight, are not, of course, met by the above rule.

Myocarditis and Endocarditis in Cases of Diphtheria, Croup, and Membraneous Angina.—In a lecture recently delivered at the *Hôpital des Enfants*, Dr. Bouchut laid stress on the frequency of disease of the heart in cases of diphtheria, and other septic diseases. The endocarditis, he said, was valvular and parietal, of a proliferating character, and was accompanied by fibrinous deposits on the diseased walls, and of large ventricular clots. The fibrinous deposits adhering to the diseased valves may become loose, and be carried away by the blood into the aorta or preliminary artery, and then give rise to embolisms.

Croup.—Dr. Robert Jordan, of Birmingham, does not believe that the majority of cases of croup have no false membrane, but are essentially inflammations of the mucous membrane of the larynx and trachea, accompanied by secretion of tenacious mucus, and also considerable swelling caused by considerable swelling into their sub-mucous areolar tissue; in other words, they are catarrhal inflammations of the larynx and trachea. When exudation is really present, it is a case of diphtheria.—*Med. Times and Gazette.*

Ingrowing Toe-Nail.—Mr. Blower cures ingrowing toe-nail by first destroying with nitric acid any granulations that may be present, and then introducing beneath the nail a piece of firmly compressed sponge, of a size something less than a grain of rice. The piece being retained in place with strips of adhesive plaster, applied longitudinally in order to avoid compression; the swelling of the sponge by imbibition causes the nail to be separated from the irritated flesh.—*Br. Medical Journal.*

Feeding by the Nose in Attempted Suicide by Starvation.—Dr. Anderson Moxey calls attention to the advantages of this method of feeding insane and other patients who decline to take food of themselves. The stomach-pump he condemns as the most unmerciful engine that has ever been used for this purpose. The mode of conducting the process of feeding is first to see that the patient has no weapon of offence, then to handcuff him, place him in a strait-waistcoat, or otherwise control his movements. Three attendants (or more if required) should firmly, but without violence, lay the patient on his or her back, on a bed, the pillows being removed. The patient's head should be received between the knees of the surgeon, the chin then slightly elevated, and a smooth Wedgewood funnel introduced within, only within, one of the nostrils, where it is to be held lightly and without pressure during the entire administration, it being borne in mind that it is simply used as a convenient medium for supplying the food to the nostril. Through the funnel thus held any fluid or semi-solid nutriment may then be poured from a jug, taking care that it is done slowly and with occasional pauses, that the patient may take breath; for the reflex acts of deglutition, infallibly excited and vainly resisted, which follows the transmission of liquids through the noses into the pharynx, follow one another so fast that a rest now and then is necessary.

Care should subsequently be taken that the patient does not have the use of his hands to produce vomiting by irritating the fauces.

The operation should be repeated every four hours, until the patient is willing to feed himself.—*The Lancet.*

THERAPEUTIC VALUE OF APIOL.—M.M. Joret and Homolle have obtained from the fruit of the common parsley, *petroselinum satiarum* or Apinus pitroselinum, a yellowish, oily, non-volatile fluid to which they have given the name of Apiol. This fluid is heavier than water; soluble in alcohol, ether, and chloroform, but insoluble in water. Its odor is peculiar and penetrating. In small doses it produces a powerful excitation of the system, a lively sensation of heat in the thorax and epigastrium, eructations, nausea, vomiting, and sometimes colic. In doses of from thirty to sixty drops it produces a kind of intoxication resembling that peculiar to haschisch or quinine. It is recommended as a febrifuge, in doses of fifteen grains or more; and though less powerful than quinine, deserves to be employed. It has also been used as a remedial agent in dysmenorrhœa and amenorrhœa. Its emmenagogue properties appear to be well established. It is best administered in capsules.—*Courit, Histoire Naturale Medicale.*

TREATMENT OF STRUMOUS OPHTHALMIA BY BELLADONNA INTERNALLY.—Dr. James Braithwaite, of Leeds, writes to *The Practitioner*, that he has for many years treated this affection by the internal use of belladonna given commonly in the form of the extract in an eight-ounce mixture containing four grains, and half a drachm of iodide of potassium. Of this, the dose for a child two years old is a teaspoonful every four hours. If no improvement results in a few days, the dose may be increased somewhat, and the quantity of belladonna in the mixture increased to five grains, and the iodide to a drachm.

He believes that belladonna should be given at once, without waiting until other means fail; that its efficacy is very much enhanced by the combination with the iodide of potassium; and prefers to use the extract of belladonna smeared upon the eyelid, eyebrow, and temple to the application of atropine to the ball, since the latter is apt to increase the irritation and photophobia, instead of relieving it. He advises the use of cod-liver oil, and finds change of air and counter-irritation with iodine paint sometimes useful in the later stages. Iron, he thinks, is injurious.

THE TREATMENT OF SYPHILIS.—At the Medical Congress of Lyons, a discussion took place upon the relative merits of mercury and iodide of potassium in syphilis, and the President, M. Diday, declared that mercury does not retard the appearance of secondary symptoms nor diminish the intensity, and he supported his opinion by an account of seventy-four cases; closing a brilliant and elaborate statement of his views by declaring that the intensity of syphilis depends less upon the medicines administered than upon the constitution and *regimen* of the patient.

TREATMENT OF FATTY TUMORS BY ABSORPTION.—Mr. John Gray, writing to the *Lancet*, of October 26, remarks the occurrence in a few cases of multiple fatty deposits in one individual, the number of distinct tumors generally varying from ten to twenty, but (it is said) sometimes reaching the number of a hundred. These deposits choose, for the most part, the arms, thighs, and the buttocks, as the seats of their growth. They do not attain great size, the tendency seeming to be in favor of a multiplication of sites rather than an increase in size of deposits. They are usually of firmer consistence than the ordinary variety of lipomatous growth; are flatter in shape, and lie more directly growth, and sometimes in closer union with the dermis. Their outline is usually, but not always well defined; they are, as far as I am able to judge, devoid of cysts, and are more or less painful on pressure according to their proximity to cutaneous nerves.

With the idea of encouraging absorption by liquefying the fat, Mr. Gray caused a patient, whom he had under treatment for this affection, to take baths, varying from 120° to 130°, as often as feasible; and he states the result to have been that many of these tumors were entirely removed, whilst the nuclei only of the firmer ones remained.

ABSORPTION OF RETAINED PLACENTA.—A. D. Robinson, M.D., Island Pond, Vt. (*Boston Med. and Surg. Jour.*, Nov. 7, 1872), relates the case of a multipara, aged 37, who he learned was delivered of a four-months fœtus, with very little pain or inconvenience, and without any after-birth. Four weeks subsequently he was summoned to her bedside, and found her suffering from quite a profuse uterine hemorrhage, attended with considerable gastric disturbance and vomiting, but no uterine pain. The patient was relieved of the vomiting by a laxative enema, which brought away a considerable quantity of hardened fecal matter; and of the uterine hemorrhage by opiates and rest. From this time the patient gradually recovered; and, if her evidence may be accepted, no placenta has been thrown off, either entire or in part, and she still continues in the enjoyment of perfect health. He adds that she is a person of unusual intelligence and reliability, and in every respect irreproachable character, which goes very far to strengthen her observation of the case. In closing, he remarks: As the question of absorption of a retained placenta is still *sub judice*, an accumulation of evidence may still be necessary to clear up this among other anomalous cases of obstetric surgery. This freak in obstetric practice would seem quite incredible were it not that cases of similar import have been long since met with.

AN UNUSUAL INJURY TO THE ELBOW-JOINT.—Mr. William Date reports, in the *Lancet* of October 26, a curious case, as follows:—

A boy, aged fourteen, was thrown from a donkey, and in falling struck upon his right arm, but in what manner was not made out. The arm was semi-flexed, and pain was caused by moving it. The elbow-joint was distorted and painful. The head of the radius was very prominent outside and below the outer condyle, and rotated freely with the rest of the bone. Above it was a deep depression in which the condyle could be obscurely felt. The olecranon could be felt below its usual position, resting with its extreme end against the trochlea. There was evidently no fracture of the ulna. While the patient was anæsthetized the position of the bones was rectified, the radius slipping into its place first, followed by the reposition of the ulna. It was then discovered that the extremity of the inner condyle was broken off. Following the reduction, an angular splint was applied.

CAFFEINE.—Dr. H. S. Purdon has lately been trying the hypodermic injection of caffeine in neuralgia from both functional and organic causes. Among his patients at the Belfast General Hospital was a case of "central neuralgia," which had resisted all plans of treatment. Under the daily use of caffeine hypodermically, commencing with half-grain doses, and increasing to one grain (dissolved in tepid water), very satisfactory results were obtained. Caffeine is superior to morphine in never producing sickness, which is so common where the latter is used hypodermically in any considerable dose. This salt has proved serviceable in allaying the sleeplessness of delirium tremens.—*The Doctor.*

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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

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THE PERMANENT MEMBERSHIP IN THE STATE SOCIETY.

THERE is perhaps nothing during the coming session of the Medical Society of the State of New York that will more especially interest a large number of delegates than the election of permanent members. One of the main reasons why the election to permanent membership is considered such a desirable distinction, is doubtless due to the fact that so few of the large numbers of eligible persons can be successful. The by-laws of the Society provide for the choice of but two members from each district, and it is expected that while two gentlemen may be gratified with the distinction conferred upon them by the nominating committee, there are scores of others who are disappointed, and who claim that justice is not done them.

So often have many aspiring gentlemen been disappointed in their expectations of election, that they have been forced to conclude that there is something more than ordinary merit and reasonable good fortune in being among the lucky ones. To any one conversant with the workings of the Society for the past ten or fifteen years, it is quite evident that the suspicions of the disappointed ones have a very reasonable foundation in fact. In other words, it must be conceded by the majority of those specially interested in such elections, that the choice is due more to influence and political wire-pulling than to any claims which may be urged by a long candidature or other qualifications. There is no other explanation for the gross partiality habitually shown to different sections and different individuals by the various nominating committees.

Very often by certain self-constituted managers of the Society, the selection of some of whom on the nominating committee from year to year seems to be a foregone conclusion, conditional promises are made a year in advance. In political parlance this would be called "Ring" influence, and it means the same thing when applied to the strictly political management of the State Society.

Although the responsibility of appointing the nominating committee rests entirely with the President, it is but justice to him to say that the appointees are made with the best of intentions, and with a conscientious regard for the best interests of the Society. He has no particular rule to govern his appointments, except presumed fitness, and in his selections he very naturally drifts into the errors of his predecessors and names such as have frequently served on the same committee before. This, we take it, is one of the reasons why the Ring influence is so strong, and why there is such a small chance for those not skilled in wire-pulling for obtaining elections, particularly as permanent members of the Society.

In the choice of permanent members, exceptions must sometimes be made in favor of gentlemen who have rendered signal service to the Society, but these should only be exceptions, and as a rule the one in a particular district who has been eligible the longest period should be the first to be the permanent member from that district.

The election of permanent members from districts other than their own is a procedure which has from time to time received the unqualified disapproval of the Society, despite the number of "buncombe" speeches to the contrary. Until the Society rendered its decision against the injustice of the measure, the practice of assigning gentlemen from the city to the rural districts was so common, that country physicians began to think that they had no rights which the metropolitan was bound to respect.

In order to initiate a reform in regard to this election of permanent members, we must begin with the appointment of the nominating committee, and must suggest to the President the selection in the first place of gentlemen who have never served before. As far as it is consistent with this recommendation, let each member of that committee be the president, vice-president, or some other responsible officer of a county society. We can under such conditions be assured in the first place of the destruction of any Ring influence which may now exist, and of insure the meting out of justice for each district which a knowledge of the requirements makes possible.

This seems to us to be the simplest method of remedying many of the abuses of which the victims of many a deferred hope complain, but if better means can be devised to insure the same end, we shall in the interests of reform be satisfied to see them put at once into operation. We know of many gentlemen, particularly from the rural districts, who have been on the eligible list for a number of years, and who have seen others placed upon that list long after them, and elected to permanent membership without any delay whatever.

When those by seniority of eligibility find themselves thus repeatedly left out for the benefit of more favored ones, and as often told that they must be patient, or "wait until next year," we cannot blame them for insisting upon their rights. There is no argument against demanding of the members of the nominating committee the election of permanent members by virtue of this very seniority of eligibility. In fact that seems to us to be the only way of remedying an evil which has been increasing year by year and has been the means of doing a great deal to weaken the influence and to destroy the usefulness of the Society. We want to see simple justice done to those gentlemen who have waited so long for it; we want to see the forgotten districts rightfully represented, and the honors of the Society impartially distributed.

While speaking of the subject of election we wish to call the attention of the Society to the claims of Northern New York for the presidency. This district although it contains some of the best educated gentlemen in the State, has never yet been honored by the Society. It is now time that the claims of the gentlemen of the North be substantially recognized and duly honored.

A NAMESAKE FOR THE MEDICAL RECORD.

When The Medical Record was started, it was with the earnest purpose of making for it an individual reputation. As a consequence of such a determination, it was a matter of a good deal of concern with the Editor and the Publishers to select a name for the new journal which should be distinctive and appropriate—one with which it would be impossible to confound any other journal, living or dead. As a result The Medical Record was given. The fact was extensively advertised both here and abroad, and appeared in the usual trade-lists. Now at the end of its seventh year we are gratified to state that it has made for itself a reputation far exceeding the most sanguine expectations of its proprietors. This much being granted, we have considered ourselves enjoying an unquestioned right to all the benefits direct or indirect which should belong to the good name which our journal has gained for itself. Now, however, we are astonished to find that a new periodical in London has defiantly assumed our title, in direct violation of what might be considered honorable even among plagiarists.

If any party chooses to start a journal, that is purely their concern; but when they impudently appropriate our name, that very plainly becomes *our* concern. We always stand ready to encourage, in any way we can, any legitimate enterprise having for its object the advance of medical journalism, and we are gratified to acknowledge the fact when any periodical makes a mark for itself; but we confess to a little selfishness when there is an obvious danger of confounding our own name with any similar undertaking whatever. We are at a loss to explain this radical departure from what our English brethren choose to style honorable transactions. We have been in the habit of looking to them as our teachers in such matters, and have been forced very often to hide our ignominious heads as an acknowledgment of the power of their virtuous anathemas against violation of copy-rights and the like. It ill becomes us, perhaps, to call their attention to this little matter; but as pupils of theirs in the principles of honor and virtue, we cannot refrain from seeking a little more light on the subject—some explanation which shall reconcile an apparent discrepancy with former principles which we have been taught to believe admitted of no gainsaying.

We shall not quote what the bard of Avon says about stealing a good name, as it might lay us open to the charge of indorsing the sentiment, and might give rise to reflections which might be considered disrespectful to our teachers, in which event we should have no right to ask for any solution of what now appears to us to be inexplicable.

We do not even dare to presume that anything in a journalistic way on this side of the Atlantic is entitled to any notice from our cousins, else we might by a stretch of the imagination construe the taking of our name as a compliment to us.

THE HEALTH OFFICER'S DEPARTMENT.

Dr. S. Oakley Vanderpoel, the Health Officer of this Port, has, as appears from his Annual Report just published, successfully carried out some very important reformatory measures in his department, which commend themselves to the consideration of every one interested in quarantine affairs. For a long time, the abuses of power and the utter disregard of the interests of the commercial communities have been a disgrace to our government.

The trouble has been, that the relations which should exist between the commercial community on the one hand, and the general public on the other, have never been definitely settled. In fact, by some unworthy representatives of our profession who have been Health Officers, there has been no desire to change a system which insured so many extortionate percentages. The result was, that the merchants were forced to believe that whenever a reasonable opportunity offered itself for the Health Officer to claim perquisites, no appeal to his sense of fair dealing had any effect. He has been their traditional oppressor, and their acknowledged enemy. Dr. Vanderpoel started with a determination to confine his office to its legitimate health functions, and he has so far succeeded in practically solving a very difficult problem, and has shown that former enemies of quarantine mean, as a class, to be fair in their dealings, and submit to any judicious health enactments. We understand that a bill has been presented to the Legislature, contemplating changes consistent with the successful experiment of our present

incumbent making what was voluntary on his part, obligatory upon his successors. At a future time we shall have more to say on this point.

REPORT OF THE SURGEON-GENERAL OF THE NAVY.

SURGEON-GENERAL JAMES C. PALMER, U. S. Navy, informs us in his Annual Report for 1872 to the Secretary of the Navy, that the bureau of which he is chief, is now engaged in collecting and preparing for publication all the cases of pathological interest which have been accumulating for so many years past. This will doubtless prove to be a very valuable addition to our national medical literature; and when it is ready for publication, we should be glad to learn that Congress has voted a suitable appropriation.

Another subject in which Surgeon-General Palmer has taken an interest, is the establishment of a school of instruction for medical officers preparing for promotion, which shall comprise a museum for marine specimens, a library, a lecture-room, &c. This is an institution so much needed, that it is surprising that the idea has not been entertained before. Dr. Palmer proposes an appropriation of fifteen thousand dollars; certainly a very modest sum with which to commence. His model is the Medical School at Netley, England; a very succinct account of which is given by Medical Inspector Shippen, U. S. N., and embodied in the annual report to which we have refered.

Reviews and Notices of Books.

OUTLINES OF SURGERY AND SURGICAL PATHOLOGY, including the Diagnosis and Treatment of obscure and urgent Cases, and the Surgical Anatomy of some Important Structures and Regions. By F. LE GROS CLARK, F.R.S., Senior Surgeon to St. Thomas's Hospital. Second edition, revised and expanded by the author, assisted by W. W. WAGSTAFFE, F.R.C.S., Resident Assistant-Surgeon to, and Joint Lecturer on Anatomy at, St. Thomas's Hospital. Philadelphia: Lindsay & Blakiston. 1872.

THESE "Outlines," we are told in the preface to the first edition, comprise little more than the notes from which the author's lectures have been delivered, somewhat amplified; and are intended for the medical student. It makes no pretence to a comprehensive system of surgery, nor does it attempt to do away with those works, without a knowledge of which a student will become but a superficial practitioner.

It has been our lot to have seen many manuals of both medicine and surgery; and we have often wished that students could be induced to leave them on the shelves of the publisher, believing, as we do, that their tendencies are injurious.

In reference to the work before us, however, we are pleased to make an exception. It is indeed what it purports to be, the "Outlines of Surgery;" and so clearly is it written, and so rich in valuable information, that it needs but to be seen and examined to make it a work of value to the young practitioner. The pathology which is taught in this little work is quite in accordance with the more modern treatises on this subject.

Among the chapters which strike us as very timely and full of valuable information, are those on the diagnosis of joint-disease and the use of the thermometer in surgery.

Here and there through the book we find doctrines taught to which we might object: but there is far more to commend than to criticise; and this is no more than we should expect from such a writer and well-known surgeon as Mr. Clark.

We must confess our surprise, however, when we see that the student is told that in the majority of cases of indurated stricture of the urethra, without other mischief being present, "the cautious employment of potassa fusa is preferable to cutting; it is both safe and efficacious, especially when the stricture is irritable." Again, we are told that tapping the bladder above the pubes is seldom practised and rarely justifiable. Have the happy results of tapping in this region with the aspirator not yet reached St. Thomas's Hospital? Still farther, we are informed, in the chapter on amputations, that amputation at the knee-joint is not to be recommended.

And in the description of glaucoma, it is said the iris is usually contracted.

With some few exceptions like these, we think highly of the work.

EVOLUTION OF LIFE. By HENRY C. CHAPMAN, M.D., Member of the Academy of Natural Sciences, Philadelphia. Philadelphia: J. B. Lippincott & Co. 1873.

THE aim of this book or essay, as stated in the preface, is to present in a condensed and popular form the evidences in favor of the evolution theory, which supposes that the animal and vegetable worlds were gradually developed, and not suddenly created. The author starts with the hypothesis of the evolutionists, and argues that it is in harmony with other conclusions of science and the records of nature.

The principal part of the book is given up to the discussion of the last point; and zoölogy, botany, palæontology, and embryology are interrogated to establish the reasonableness of the theory.

The question of the vital force that gradual development calls for leads to the discussion of natural selection, to which the author heartily commits himself.

The last chapter is devoted to the origin of man, and the conclusions are not essentially different from Mr. Darwin's. Frequent allusion is made to the views of Lamarck, Darwin, Wallace, Spencer, Owen, and others, from whose works the data were chiefly taken.

Haeckel's classification of the order maintained in gradual development is the one adopted. The author does not regard it as unassailable, but, in general, correct; and he believes that the transitional forms that are now lacking to make a continuous chain will at some time or other be discovered. The subject is relieved of a good deal of its abstruseness by a pretty clear and precise style and frequent use of tables and wood-cuts. While most of us may be unwilling to reject the doctrine of divine creation, taking up as a substitute any theory, whether of spontaneous generation or evolution, which is admitted by their supporters to be still imperfect, we can at the same time get pleasure and profit from the discussion. We may take exception to the evolutionists in their methods of reasoning; but most of the facts are indisputable, and reflect great credit on the master minds who have collected and systematized them.

The author has doubtless had extraordinary facilities

for prosecuting his studies in this field, and has shown some originality in his deductions, though we believe few will feel ready to accept them at present.

ON A NEW METHOD FOR EXTRACTION OF CATARACT. By R. LIEBREICH. (Reprinted from St. Thomas's Hospital Reports, Vol. II.) Philadelphia: Claxton, Remsen and Haffelfinger. 1873.

THE operation for cataract proposed by Liebreich is a modification of the method described by von Gräfe. The objections to this latter method, which it is argued may be avoided by the operation now proposed, are urged as follows:

1. It is impossible to remove the lens without iridectomy. 2. The excision of the iris must be very extensive, else the iris tends to prolapse. 3. It is necessary to perform the operation above, in order that the enlarged part of the pupil may be covered by the upper eyelid; the removal of the lens upwards is far more difficult, on account of the tendency of the eye to roll upwards; and, consequently, 4. During the whole operation the eye has to be kept open by the speculum, and to be drawn downwards by the forceps. This is not only painful and injurious to the eye itself, but causes, 5, not unfrequently, prolapse of the vitreous body, to which a peripheral incision itself always tends. Prolapse of the vitreous body and hemorrhage into the anterior chamber are the chief impediments to a careful removal of all the *débris* of the cortex, and cause, 6, those grave forms of iritis which are kept up by the permanent irritation caused by the tumefied remains of the lens behind the iris.

Liebreich's modification consists in making the incision below, within the cornea, and without doing iridectomy. The smallest Gräfe's knife is used. In making the incision it is held with its back horizontal and backwards, the plane of the blade making with the horizontal meridian of the eye an angle of about 45°, and in the same direction is passed through the cornea. The points of puncture and counterpuncture are placed about one millimetre beyond the cornea, in the sclerotic, in such a situation that the centre of the but very slightly curved incision falls about two millimetres within the cornea's margin. After the incision is made the eye may be closed. The capsule having been opened, a Daniel's spoon is slightly pressed against the inferior margin of the cornea, and gentle pressure is made with the finger through the upper lid upon the highest point of the cornea. The lower margin of the lens then rotates forward, and, pushing the iris before it, passes over it, to appear in the gaping wound of the cornea. A slight downward pressure of the upper lid suffices to expel it.

The operation is done without anæsthesia, and the speculum and forceps are dispensed with.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 27, 1872.

DR. A. L. LOOMIS, PRESIDENT, in the Chair.

STRICTURE TREATED BY ELECTROLYSIS.

DR. ROBERT NEWMAN exhibited a small calculus for the purpose of referring to the history of the patient from whom it was discharged. The patient had suffered for nine years from traumatic stricture, the result of a perineal bruise while in cavalry service during the late war.

For a long time he was treated by bougies, until finally the stricture almost entirely closed, the urine merely dribbling away. Galvanic battery was used June 22, and a No. 3 passed the stricture.

Aug. 13th.—Under chloroform, galvanic battery (a steel sound as negative, twenty cells for twelve minutes), passed the stricture; next, without chloroform and with electrolysis, passed a bougie No. 15. Two hours afterward the patient left for home.

Sept. 9th.—Is worse again; endoscope shows a very irritable urethra, and the stricture closed up by plastic lymph thrown out after the last operation. Urethral emollient suppositories ordered, and the patient sent home.

Sept. 13th.—Returned to New York. No instrument passed the stricture. Dr. W. Maxwell present in consultation. No further attempts were made, thinking it not advisable to operate here, away from his friends.

Sept. 25th.—Dr. Newman operated in Hartford. Present Drs. Storrs, Fuller, Ellsworth, and Russell. Chloroform; galvanic battery, twenty cells; a steel sound No. 7 as negative; passed the stricture after the electrolysis was kept up for half an hour. Hemorrhage was unavoidable.

Subsequent to the operation, Dr. Storrs sent an account of the results of the case, which may be summed up as follows: First night after the operation, restless; at the first attempt to urinate only blood passed; the second time, before daylight, urine passed in a full stream. Morphine in half-grain doses every two hours through the night. Urethral fever for three or four days.

Oct. 1st.—More difficulty in urinating. Chloroform, and a No. 3 catheter passed, followed by a No. 5, and left for the night. An hour after, patient in great pain, and a restless night. Catheter removed in the morning. In evening attempted to pass water, but stopped; soon after the calculus voided. The patient subsequently made a good recovery.

IMPERFORATE ANUS.—PASSAGE OF A BUTTON IN THE BLADDER.

DR. POST presented a specimen taken from a child eleven months old, who at the time of birth was found to have an insufficiency of the anus. Dr. Bird, of Jersey City, whose patient the infant was, made an incision in the anal region, two inches in depth, and opened the pouched extremity of the rectum, giving vent to meconium. He made an effort to draw the incised gut downwards and attach it to the integument of the verge of the anus, but was unsuccessful. The wound healed, and the little patient lived in good health until a few weeks before death, passing the fæces in a liquid state through the urethra. The immediate cause of death was an obstinate diarrhœa.

At the autopsy the rectum was found to terminate in the prostatic portion of the urethra, where there was a free communication with the latter canal, and, through it, with the bladder. On examining the bladder, it was found to contain a small button with some clothing attached. This had probably been sucked off some part of the garments during the life of the child.

He next exhibited several sequestra removed from the lower part of the shaft of the femur of a patient, aged twenty-two. Five years ago he suffered an attack of osteitis, the result of exposure to cold. There was enlargement of the condyles of the femur together with the head of the tibia. Above the condyles sinuses in due time formed, through which

purulent matter and several small fragments of bone were discharged. About a fortnight since an incision was made over the region of the outer sinus, and the periosteum was found very firmly adherent to the involucrum, and it was with great difficulty detached. The involucrum was then chiselled away, and an opening large enough to introduce the finger having been made, the spiculæ presented were found lying loose in the cavity. The point of interest was the disproportionately large size of the cavity compared with the pieces of bone removed.

IRIDO-CHOROIDITIS—EXTIRPATION OF EYE.

He also exhibited an eyeball which he had enucleated three weeks before. The patient was a man aged 50, who had an attack of small-pox during infancy, since which time the left eye had been nearly destroyed by effusion. He had some slight perception of light, which he retained until twenty years ago, when from some cause unknown he lost the remaining remnant. There was, however, no disfigurement of the eyeball until ten years ago, when a little opacity of the cornea showed itself. This latter condition continued until the operation. Six weeks ago this eye became quite painful, and caused a sympathetic irritation of the opposite one. On examination a dense yellowish fibrinous mass was found occupying almost the whole of the anterior chamber. There was besides a thread-like membrane extending from the anterior to the posterior portion of the fundus oculi. It was evidently a case of long-continued irido-choroiditis.

Dr. Peters asked, in reference to Dr. Post's case, if it was not a common occurrence to notice a communication between the bladder and rectum.

Dr. Mason remarked that some years ago he collected a hundred cases of bladder-trouble, and in twenty of these the lower bowel communicated with the bladder or with the vagina.

A CASE OF MALIGNANT ICTERUS.

Dr. Mary C. Putnam presented a specimen of liver, for the opportunity of obtaining which she was indebted to Dr. Jerome C. Smith. The patient was a woman who for about two years had been addicted to habits of intemperance. Nineteen days before death, having been previously in apparent good health, she became suddenly jaundiced, and immediately took to her bed, with symptoms of great prostration attended with vomiting, fever, and a certain amount of intestinal hemorrhage. The temperature was very high, and the pulse never below 120. The patient was not under Dr. Smith's observation until four days before death. She never had convulsions, nor coma, but died with paralysis of the pneumogastric nerve, with congestion of the lungs simply as an ultimate symptom. The attending physician had discovered enlargement of the liver with these symptoms, but at the time—three or four days before death—there was a very considerable tympanitis, and a certain amount of serous effusion in the peritonæum.

With this history, she anticipated atrophy of the liver caused by acute hepatitis—the so-called malignant icterus—and was much astonished to find a liver very much enlarged, occupying as it did the entire right hypochondrium, extending over to the left hypochondrium, and weighing ten pounds. It was evidently fatty and was also deeply impregnated with bile, as were all the tissues in the abdomen. The jaundice persisted to the day of death, and the skin was deeply colored at the time of the autopsy. The serum in the abdominal cavity was very yellow, as also the fat in the mesentery, which was quite abundant; also the frothy fluid that was expressed from the lungs. The heart was small, but did not appear to be overcharged with fat. The kidneys were moderately large, and the cortical substance was evidently very fatty. The heart and kidneys proved to be the seats of fatty degeneration: the tubes of the latter organ were not however infiltrated with fat, the epithelium in most of them being intact. The liver presented nothing more than those appearances which belong to fatty liver.

To explain why this jaundice coincided with fatty liver, an attempt was made to ascertain if there was an obstruction to the course of the bile. Nothing of the kind was however found. The gall-bladder was empty. The small intestine was small in calibre and filled with mucus. There was not the slightest appearance of cirrhosis of the liver, neither were there any evidences of acute atrophy. The cause for the jaundice then was not clear: it might possibly have been due to the destruction of cells by excessive fatty degeneration—a very rare circumstance—or to the fatty degeneration of the muscular fibres of the heart with a consequent low pressure in the blood-vessels, favoring the entrance of the bile in the veins rather than in the ducts. The spleen was much enlarged and nearly dilluent.

Dr. Janeway remarked that he had seen several cases of fatty liver with fatal jaundice, and believed that such a result was due to pressure of the enlarged organ causing obstruction in the flow of bile.

Dr. Putnam.—But in this case the gall-bladder was empty.

Dr. Janeway.—The pressure might have been exerted above that point. We might explain the result in another way, by a defective function of the liver in consequence of degeneration of the cells. The liver fails to perform its function in this regard, the same way as does the heart when there is fatty degeneration of the muscular fibres.

Dr. Putnam did not think that there was such a strict analogy between the functions of the liver and the heart as was maintained by Dr. Janeway. In one, the loss of function was easily explained by a mechanical defect; in the other, the complex function of secretion was involved, admitting of no such explanation.

Dr. Loomis stated that there was one element which had not been considered, viz., the high temperature and rapid pulse, a very unusual concomitant of jaundice with fatty liver.

Dr. Putnam remarked that such conditions were the very ones upon which the diagnosis of malignant icterus was based, and which she was unable to explain by any of the autopsical developments.

Dr. J. C. Peters asked if there was any duodenitis present, and was answered in the negative.

DOUBLE UTERUS—STRICTURE OF ŒSOPHAGUS FROM ENLARGED GLAND.

Dr. Janeway presented a complete double uterus and double vagina, taken from a girl aged 13, who died of acute tuberculosis.

A second specimen was removed from a female patient of Bellevue Hospital, aged 34. She was admitted to the hospital in September. For six months before admission she had experienced pain on eating solids, which condition gradually increased until she was compelled to abstain from them altogether. There were found on examination evidences of phthisis in the upper portion of right lung. After a time the same distress was caused by fluids, and she finally died

from exhaustion. Her pain was referred first towards the cardiac orifice of the stomach, and later towards the top of the sternum.

The autopsy showed, in the first place, a consolidation of the upper part of the right lung; secondly, an enlargement, with cheesy degeneration, of the lymphatic glands around the division of the trachea and around each bronchus. Those glands on the right side had advanced to suppuration. The right pneumogastric nerve was pressed on by the enlarged glands at the root of the lung. At a point of the œsophagus corresponding to the bifurcation of the trachea a firm stricture existed, caused by an enlarged gland behind. The stomach was healthy. Besides this, there was found waxy degeneration of each kidney, and in addition a thrombosis of the left renal vein running into the vena cava. It had not produced any particular effect upon the kidney, and was evidently formed during the last days of life. In addition, there was brown atrophy of the heart.

PERITONEAL ABSCESS—PERFORATION OF FALLOPIAN TUBE.

The third specimen was taken from a patient admitted October 19,—a woman aged 35. She had an attack of intermittent fever three years ago, which left her with a pain in the side, and cough. Three weeks before admission this pain had mostly disappeared. Her general appearance was such as to give rise to the suspicion that suppuration existed somewhere; and having leucorrhœa at the time, it was deemed expedient to make a vaginal examination. There was then discovered a general rigidity—a binding down of the tissues of the pelvis. Pressing upwards and backwards and a little to the right, what appeared to be a small rounded tumor was discovered. As there had been considerable difficulty in passing water, a catheter was introduced; but the operation gave rise to such an amount of pain that the operator was forced to desist. The diagnosis made was cystitis, pelvic cellulitis, and perhaps a small tumor in the pelvic cavity. She continued in about the state described, when she began to sink, becoming drowsy, with some febrile movement, and finally died stupid, refusing towards the last to take any food. Her coma was doubtless due to the failure of her renal secretion, the result of an attack of acute interstitial nephritis.

At the autopsy the bladder contained a good deal of pus, and there was a fibrinous exudation on the posterior wall, in the centre of which was an opening large enough to admit the finger, leading into an abscess of the peritoneum. This abscess, filled with shreddy material, was closed by adhesive inflammation of the contiguous portions of the uterus, sigmoid flexure, and broad ligament. The mucous membrane of the uterus showed evidences of chronic inflammation, and the Fallopian tubes were twisted and dilated, having a perforation communicating with the abscess. There was also a small lobular pneumonia in the upper part of the right lung. The origin of the abscess seemed to be in a perforation of the Fallopian tube, while the perforation into the bladder was a secondary result.

Dr. Markoe asked if the patient with stricture of the œsophagus had been transferred from the surgical side, as he had a case of that sort which he had diagnosticated as cancerous.

Being answered in the negative, Dr. Delafield stated that he had made an autopsy upon the case referred to by Dr. Markoe, and found it to be due to a cancerous infiltration low down the œsophagus, two or three inches above the cardiac orifice.

SYPHILITIC DEGENERATION.

Dr. Delafield presented a microscopic slide containing a mounted cross section of the cauda equina, removed from a man aged 46, who had during his life been guilty of very intemperate habits. He had had sores upon his penis an indefinite number of times, the last being about five years before Dr. Delafield saw him. He had no secondary symptoms of any kind, being capable of following the occupation of a woodmoulder until six months before his death, when he began to have pains in his legs, most severe at night. Three months ago his pains increased in intensity, and were followed by numbness and loss of power of his lower extremities. This condition continued until he lost control over his rectum, the urine being passed with great difficulty.

He was admitted into Roosevelt Hospital one month before his death. At the time there was a large bedsore over the sacrum, a considerable loss of power in both legs—most marked in the left, as was also the diminution of sensation. He was able to walk, however, by leaning upon the shoulders of two persons. His general condition somewhat improved for a while, although his loss of power and sensation remained about the same, and he finally lost all control of the bladder, necessitating the daily use of the catheter. Finally, there was an attack of erysipelas, commencing in the bed-sore and extending down one thigh. The constitutional symptoms were very grave, and he soon sank.

The only organs presenting any interesting changes were the kidneys, bladder, and spinal cord. The bladder presented the evidences of acute cystitis; it contained purulent urine; the walls were reddened, thickened, and coated with fibrine. The kidneys showed evidences of acute suppurative nephritis. There were no changes in the cord itself. On examining the large nerves given off from its lower end, forming the cauda equina, it was found that on the front and left side three or four were matted together, in which situation was found a cheesy yellow tumor. In front on left side, and farther down, were two or three matted together, but here there was no tumor.

In the centre of this tumor was a small cheesy mass. It was of some interest to ascertain the manner in which this syphilitic inflammation had attacked the nerves in order to form this tumor. The nerves could be found in all stages of a change which culminated in the cheesy degeneration in the centre. The first change, shown by a section through the periphery of the tumor, was a thickening of the fibrous tissue between the nerve-fibres. This thickening increased, and the fibres became more and more compressed, so that finally only a confused mass could be recognized. Further in, a cell-growth was evident in this new fibrous tissue. These cells were small and rounded, such as we find in most syphilitic tumors. Ultimately these new cells seem, with the nerves themselves, to break down into the cheesy material already described.

There was a small gummy tumor on the internal surface of the cerebral dura-mater, and also nodes on the tibia.

POST-PERITONEAL TUMOR IN INFANT.

Dr. Jacobi presented a large tumor, with the following remarks:—This tumor, Mr. Chairman, has been removed from the body of a child who was three years and four months old at the time of its death. The patient was first presented at my clinic in this college (College Physicians and Surgeons) three months ago, with a large swelling of the abdomen. There

was dulness on percussion over a large surface; there was tympanitic percussion sound in the right iliac fossa, and upwards in the right renal region; there was tympanitic percussion sound also in the region of the left kidney, adjoining the spinal column. There was a tympanitic percussion sound about two and a half inches above the projecting umbilicus, in the median line and a little to the right. It did not feel like a uniform or solid mass, and showed five or six indentations. It showed a particularly large depression in the median line. It yielded a dull percussion all over, and also a more or less distinct sensation of fluctuation. This was so distinct in some parts that I believed that I had to deal with a cavity at least a part of which contained a liquid. There was now and then a peculiar crackling sound by pressure upon the tumor in the median line. The sensation of fluctuation was principally confined to the left iliac fossa. The crackling sound encouraged me to believe that I had a case of echinococcus; the hardness of portions of the tumor made it more probable that I had to deal with a conglomerate of cysts with an intermixture of solid masses—in a word, a cystic sarcoma. In a number of examinations the sensation of fluctuation was always distinct. I introduced an exploring needle a number of times and succeeded in obtaining nothing but blood. In two instances only I brought away a liquid. I examined this carefully, but not finding any hooks, I gave up the idea of echinococcus. Inasmuch as there was tympanitic percussion in the regions of the kidney, I gave up the idea of cystic disease of those organs. The spleen was the only organ that seemed to be involved in the growth, and I took it for granted that I had a case of cystic degeneration of that organ.

The report was that the child had been ill all his life; that about half a year before it was presented to my clinic, a swelling had been noticed in the region of the umbilicus, and a little above, extending in the direction of the liver, and that a physician in attendance had taken it for a "swelled liver."

At the time I saw the swelling it was mostly on the left side. The child was under observation for ten or twelve weeks. The tumor in the mean time grew so that it finally filled the whole abdominal cavity. Only in the right side the tympanitic sound continued constant. Moreover a little tympanitic percussion sound could be discovered in the left side, two or three inches above the anterior superior spine of the ilium. The child continued in pretty good condition, and after the tumor had become old I excluded the possibility of malignancy; there were no symptoms of peritonitis, and I began to think earnestly of attempting to remove the growth, large as it was, believing that I had to deal with an enlarged spleen. I did not entertain opening the abdomen with the knife, but determined, instead, to resort to the Vienna paste, thus producing an adhesive inflammation and allowing me to enter the cavity of the cyst, as I had previously done by the same means. The gentleman who applied the paste, selected a place somewhat different from the one I had pointed out, and the result was that a portion of the colon which covered the tumor was injured, and the child, during the last week or ten days of its life, suffered from a stercoral fistula. The child did very well with this fistula until a few days before his death, when symptoms of peritonitis showed themselves, and death finally ensued.

This portion of the abdominal wall, taken from the left side, shows the artificial opening made by the Vienna paste. The larger portion of this tumor was found in the left half of the abdominal cavity, and, lying against the vertebral column, presents a correspondingly deep groove. This groove would extend forward to here, and this is just that portion in which, especially in the beginning, I would have a tympanitic percussion sound. In here was a good deal of that sensation resembling fluctuation, and in that neighborhood I wanted to find my way into the cyst. The tumor is lobulated, and there are grooves everywhere; it appears to consist of a number of tumors which are either adhering to or growing out of an original stock. In this neighborhood you find fresh adhesions, the results of peritonitis, originating the last few days. This is the peritoneum which covers the whole tumor, and can easily be peeled off. There were no considerable adhesions with any organ of the abdominal cavity, with the exception, perhaps, of the spleen, which you see here in a normal state. The mistake in diagnosis was simply due to the fact that the tumor was so adjacent to the spleen that a dull percussion sound from it was continuous with the whole. The principal adhesions were found posteriorly. About the last dorsal and upper lumbar vertebræ it was, to a certain extent, difficult to tear off the tumor; and here you find a single place adjoining the upper lumbar vertebra, in which a portion of the mass is torn in an attempt to remove it. The rest followed pretty readily.

On cutting into the tumor there are found a large number of little cysts, some of them the size of half a walnut, and some the size of a pea. In a large number of instances there were apparently small hemorrhages, but those appearances are mostly due to an imbibition of the walls of the large vessels, which generally contain a good deal of loose fibrine. The consistency of the tumor varies, and I have since believed that the peculiar crackling sensation in my first examinations was due to my pressure upon the central portions of the tumor. The microscopical composition of the tumor is pretty uniform. There is some elastic tissue in it, and a good deal of cellular tissue, mostly found in the darker portions. The white portions consist mostly of spindle-shaped cells. The softer portion, one of which I show you, and one to which the tumor is principally attached, consists of round cells altogether, so that there is this portion which appears isolated. On opening it, it has the peculiar white color, and is evidently more consistent in consequence of the compression of the large tumor. This mass forms a separate tumor, which is embedded into the large mass, which it appears came very near being torn, and it might have been found as a free body. This also consists of round cells, with a very few spindle-shaped cells. The whole mass is a sarcoma with a very large number of cysts, and by no means what I took it for. The diagnosis was not correct, neither as far as its nature nor its locality were concerned. It evidently took its origin from the retro-peritoneal glands in the neighborhood of the lower dorsal and upper lumbar vertebræ. It cannot be expected that a tumor of this size (seven and a half pounds) would confine its origin to one point.

(To be continued.)

Chemical Probes.—M. Deneux, of Calais, in order to detect the presence in wounds of metallic bodies, employs threads impregnated with acetic acid, fixed to the extremity of a probe. After an examination the probe is withdrawn and the threads subjected to a reactive agent (iodide of potassium, cyanide of iron, ammonia), which indicates immediately and accurately the nature of the metal, if any be present (?).

Correspondence.

THE MECHANICAL LEECH.

To the Editor of the Medical Record.

Sir:—As several persons who have used the mechanical leech described by me in the Record for Nov. 1, 1869, have complained that its action was not satisfactory, more explicit directions for its use seem to be called for.

1. The incision should penetrate the whole thickness of the skin.

2. *Not more than two drops* of ether should be placed in the tube.

3. The tube should be held for ten or fifteen seconds in *hot* water, which should cover all but the mouth of the tube, where it is held by the tips of the fingers.

4. The tube should be applied *quickly* to the part, and held there until firmly attached, the skin having been previously moistened and any hairs removed.

Applied in this way, I have found the leech to be perfectly satisfactory, and much less unpleasant to the patient than the living animal. There is no delay in getting it to take hold, which saves a great deal of annoyance to both operator and patient.

It is *safer* than the living leech, as all hemorrhage ceases the moment the tube is detached.

I have had for a long time under my care a lady who has a tender spot in the spine, accompanied by the usual symptoms, and for whom all the approved forms of treatment, including galvanism, have been fruitlessly employed. The application of a couple of leech-tubes gives her immediate temporary relief, and by the repetition of this she gets on tolerably comfortably, and is slowly improving.

The Mechanical Leech has been adopted by the medical department of the U. S. Army, and is supplied to each military post.

Yours truly,

Andrew H. Smith, M. D.

New York, Dec. 6, 1872.

New Instruments.

GLASS PLEXIMETER.

By M. Hesse, M. D.,

Dresden, Saxony.

We present to the profession a new pleximeter manufactured of glass which was introduced at the meeting of naturalists and physicians in Leipzig, August, 1872. We received the following information concerning this pleximeter in a letter kindly forwarded to us by Richard Hesse, M.D., of Brooklyn, N. Y.:—

This form of pleximeter had its origin in the desire to procure a transparent medium through which to observe the skin when subjected to pressure. The method at present used—pressure with the finger—has the disadvantage in not being equable: and we are often left in doubt whether an existing redness of the skin, as is seen in cases of acute or chronic exanthematic diseases, orginate in hyperæmia or hæmorrhagia, or whether there is a combination of both. With this method we are also often not capable to determine distinctly such weaker differences of color as are existing when previous remains of inflammation or hæmorrhagia are still in the skin. The imperfection arises from the fact that the anæmia caused by the pressure of the finger no longer remains after lifting it, or will at least be modified by the re-entering circulation.

If we really endeavor to become perfect in our examinations and methods, this pleximeter will be a step forward, and will correspond more with the demands to be made on such an instrument. In this modification of the pleximeter—an instrument in the hands of almost every physician—I have succeeded without augmenting the instrumentarium. According to my experience the glass pleximeter is in no way inferior to those now in use (ivory, rubber, wood), excepting that it may *perhaps* be more easily broken. But beyond the advantage mentioned above there are others that will surpass that trifling disadvantage; these are due partly to the material, partly to the form and workmanship.

The following is a description of the instrument, as I have found it most suitable, after the inspection and examination of a great number of samples partly made by hand, partly in moulds.

The pleximeter is in the essential part formed after that of Fraube (Berlin). It is manufactured of the best Bohemian flint glass, blown into a metal form, cut and of course perfectly clear and transparent. It is 4 centimetres long, 2 centimetres broad, and a half centimetre thick. The ends turned up in right angles are 1¼ to 1½ centimetres high, and well rounded. The lower surface is slightly convex, and the edges touching the skin are well ground off, the corners likewise. Upon the face the French (centimetre) measure has been engraved, and divides it in 4 equal parts.

The depth of this pleximeter (½ centimetre) has in percussion as little influence as the much thicker finger; in comparison with the ivory pleximeter it has the advantage of not producing the peculiar clicking. Besides, the thickness of the instrument adds considerable to its durability. Its lower convex surface renders it much more adaptable than the straight ivory pleximeter; this advantage is still increased by its small dimensions (2.4 centimetre), and rounded edges and corners, so that it can always be applied even in the narrowest and most sunken intercostal spaces and fossæ clavicularis.

The height of the turned-up ends leaves the manipulation very easy for the examiner. By its given dimensions and engraved measure we are, without any further trouble, able to determine the limits in linear percussion, for which the turned-up ends as well as the edges of the plate may be likewise used.

Lastly, I mention that, after using it in contagious diseases, it may be cleansed and disinfected in acids, etc.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 5, 1873, to January 18, 1873.

Vickery, R. S., Assistant Surgeon.—Assigned to duty at Key West, Florida. S. O. 3, Dept. of the Gulf, January 6, 1873.

De Witt, Calvin, Assistant Surgeon.—Assigned to temporary duty at the Presidio of San Francisco, Cal. S. O. 168, Dept. of California, Dec. 30, 1872.

GIRARD, A. C., Assistant Surgeon.—to report by letter to the Commanding General, Dept. of the South, for assignment to duty. S. O. 12, War Dept., A. G. O., January 15, 1873.

WEISEL, DANIEL, Assistant Surgeon,—to report by letter to the Commanding General, Dept. of the South, for assignment to duty. S. O. 12, C. S. War Dept.

NAVY NEWS.

List of Changes in the Medical Corps of the Navy from December 12, 1872.

Assistant Surgeon C. A. SIEGFRIED, to the U. S. S. Richmond.

Assistant Surgeon J. M. R. SIMMONS died at U. S. Naval Hospital, Philadelphia.

Assistant Surgeon WM. A. CORWIN, to U. S. Naval Hospital, Chelsea, Mass.

Assistant Surgeon G. O. ALLEN, to U. S. Receiving ship Ohio.

Surgeon M. BRADLEY, to U. S. Navy Yard, N. Y.

Passed Assistant Surgeon F. M. DEARBORNE, to U. S. Storeship Supply.

Acting Assistant Surgeon J. W. ELSTON, to U. S. Naval Station, Mound City, Ill.

Passed Assistant Surgeon DWIGHT DICKINSON, to U. S. Naval Hospital, Yokohama, Japan.

Passed Assistant Surgeon H. M. RUNDLETT, waiting orders.

Medical Director GEORGE MAULSBY, retired.

Assistant Surgeon E. C. THATCHER, sick leave.

Assistant Surgeon W. B. DAVIS, U. S. Iron-clad Saugus.

Assistant Surgeon P. P. BIELBY, waiting orders.

Assistant Surgeon H. M. MARTIN, to U. S. Navy Yard, Washington.

Surgeon A. C. RHOADES, to U. S. S. Guard.

Surgeon J. S. KNIGHT, to U. S. Receiving ship Ohio.

Assistant Surgeon WM. G. FAREWELL, leave of absence.

Medical Items and News.

THE NAVAL MEDICAL BOARD FOR THE EXAMINATION OF CANDIDATES for admission and promotion in the Medical Staff of the Navy has reconvened at Washington with the following detail:—Medical Director William Grier, *President;* Medical Inspector Thomas J. Turner, Medical Inspector John S. Taylor, Medical Inspector Albert G. Gihon, *Members;* and Surgeon Philip S. Wales, *Recorder*. There are about twenty-five vacancies in the grade of Assistant Surgeon.

CLIMATE OF DENVER, COLORADO.—Dr. H. Norton, of Detroit, Mich. (*Detroit Review Med. and Surg.*, Sept., 1872), submits the following general observations concerning the climate of Denver, the result of a residence of two months there—April and May, 1872:—It is situated at the junction of Cherry Creek with the South Platte, in latitude 39°40', 5,317 feet above sea level. The brilliancy of the light is very disagreeable to those having a very sensitive retina, often necessitating the use of colored glasses, while the diminished atmospheric pressure so affects the physical condition of the eye as to require increased power of accommodation. Having on one side an immense plain to be heated by the sun's rays, and on the other a lofty range of mountains covered with perpetual snow and ice, great and sudden changes frequently occur. During the months of June, July, and August it seldom or never rains, and the heat is excessive, the mercury standing occasionally at over 100° in the shade. During this heated period storms of cold wind, called sand-storms, are frequent, so that persons out any distance riding for pleasure in mid-summer are obliged to take with them thick, warm wrappings to put on in case of a sand-storm, or run the risk of being dangerously chilled. Winter commences as early as the end of September, and continues occasionally as late as May, and consists of alternations of bright sunshine, clouds, rain, hail, snow and wind, the mercury sometimes sinking as low as 42° below zero. The pressure of the atmosphere at Denver is two and a half pounds to the square inch less than at the sea level. Nasal catarrh is quite common, and assumes a chronic form, the membrane becoming reddened and inflamed, then covered with a scab, which falls off or may be removed, but is speedily reproduced, the membrane refusing to heal. A certain number of asthmatics who visit this place are benefited, or even cured, but not all. Cases of asthma and chronic bronchitis are sometimes greatly relieved or cured by a residence here; and perhaps also threatened, but not developed, phthisis. The coming into this high altitude is especially dangerous to persons who have disease of the heart, the action of which is increased from five to eight beats to the minute; and to those whose lungs are much curtailed in their capacity to receive air. Acute rheumatism is very prevalent; and he heard of several cases of congested kidney, with albuminuria, due to sudden changes of temperature. The high altitude would seem eminently suited to persons troubled with apoplectic tendencies. This climate has been called tonic in its effects. On the contrary, it is prostrating, and a quantity of stimulants greatly in excess of what would be borne at the East is here tolerated. A disease peculiar to this region, called mountain fever, a kind of remittent with typhoid tendencies, is of frequent occurrence, and sometimes fatal.

EXTRAORDINARY FECUNDITY.—Dr. Becker-Lawrich de Rouneberg communicates to the society of "Gynécologie," under the name of extraordinary fecundity, the case of a woman married twelve years, and now pregnant for the nineteenth time. At first she was confined at the full term; then she aborted nine times in succession at four months, was delivered subsequently at eight months, and after that aborted seven times in succession at the fourth month. At the date of report she is again pregnant, but states that she feels the precursory symptoms of abortion.

PULMONARY TUBERCULOSIS.—According to reliable statistics, one-seventh of all the deaths throughout the world are due to consumption. In the United States, in the years 1859–60, the number of deaths from this disease was 49,082, being in the proportion of 13.79 per cent. to that from all other diseases.

AIKEN AND ITS CLIMATE.—Such is the title of a handbook, by W. H. Geddings, M.D., giving full particulars concerning the climate of that portion of South Carolina laid out in 1833 by a land-company, and called Aiken, in honor of William Aiken, its first president. Since the year 1845, its virtues have been known to the Northern public as a place of resort for invalids, possessing more tonic properties than the mild debilitating climates of Cuba and Florida.

In the winter of 1869–70 a little over 800 names of visitors were registered; in that of 1870–71 the number reached to 1,200, whilst in 1871–72 they exceeded 1,600. Two extensive hotels and a great number of private boarding-houses can accommodate all who desire to obtain relief in a mild climate, the supplies being obtained from the markets of Augusta, Charleston, and New York. It is a town of about two thousand inhabitants, situated on the most northern point of the South Carolina Railroad, 120 miles northwest from Charleston, and nearly six hundred feet above the sea level. The mean annual temperature for the last ten years was 61.95; for the months of October, 62.03; November, 52.27; December, 45.62; January, 47.05; February, 58.29; March, 53.29; April, 62.17; May, 69.75; June, 75.17; July, 79.90; August, 77.14; September, 72.54. The prevailing wind from the years 1860 to 1867, inclusive, was from S. W. in 39 months; N. E. in 18 months; W. in 15 months; E. in 12 months; S. in 4 months.

Dr. Goddings shows that the following conditions, which are essential to the comfort and well-being of phthisical patients, are found in that locality: 1st. Dryness, the first attribute of a good climate for consumptives. 2d. Elevated position. 3d. Fresh and pure air, which will permit, without discomfort, the patient to spend the greater portion of his time in the open air.

Deaths from Cancer in Philadelphia.—Dr. J. Stoeum Hough, of Philadelphia (*Obstetrical Gynæcological Soc.*, Sept., 1872), gives valuable statistics concerning deaths from cancer occurring in Philadelphia from January 1, 1861, to December 30, 1870; showing the relative proportion of males and females dying of this disease; and the percentage of women dying of cancer of the uterus. Total number of cases, 2,059. Cancer of the uterus, 413. The table indicates that, on an average, 232 women die of cancer to every man; or, 232 per cent. die of cancer of the uterus; or, 20.04 per cent. of the whole number, without regard to sex. There were only three cases of cancer of the ovaries, and six cases of cancer of male genitals. Of cancer of the breast there were 163 cases. The result shows that 862 women and 612 men died of cancer of organs not *peculiar* to their sex; showing that 40.74 per cent. more women than men die of cancer of organs common to both sexes. Of those women dying of cancer of the uterus, 60.8 per cent. die after the climacteric, while 39.2 per cent. die before this period. Cancer of the breast is still more fatal after this period, 78.5 per cent. dying after 45 years of age. Of women dying of diseases peculiar to their sex, 61.88 per cent. die before the climacteric, and 38.12 per cent. die after this period.

The author would suggest that the deductions derived from his tables may be of some value in the selection of cases in life insurance risks; for in general it appears that a woman's chances (probability) of life (so far as these affections are concerned) are nearly twice as great after the climacteric as before; that between twenty and forty years is the most critical period of her life; she is more than twice as liable to cancer after 45 years as she was before. Notwithstanding all this, in general women above 45 years (climacteric) have, he is persuaded, greater probability of life than men of the same age.

Southern Medical Colleges.—Dr. J. T. Darby has resigned his chair in the Medical Department of the University of South Carolina. Dr. Robert Gibbes, of Columbia, S. C., has accepted the position.

The Louisville Medical College has over two hundred students.

The Augusta Medical College of Georgia has been made the Medical Department of the University of Georgia.

Modern Medicine.—This is the subject of an Introductory Lecture, delivered October 8, 1872, at the Jefferson Medical College, Philadelphia, by J. M. Da Costa, M.D., newly-appointed Professor of the Principles and Practice of Medicine—published at the request of the students in attendance at this medical college. He alluded to the valuable aid of the microscope, thermometer, laryngoscope, and ophthalmoscope, and in speaking of the pulse-tracer, or sphygmograph—very useful, no doubt, in pathological and therapeutical inquiries, but of unsettled value as an instrument needed at the bedside—and all kinds of scopes and graphs, he looked upon this multiplication of instruments with some dread. The instruments to be employed should be simple ones.

He specified the following therapeutic subjects which are now engaging particular attention: anæsthetics, hypodermic medication, electricity. The remainder of the monograph is devoted to the great question connected with the science and art of medicine, namely, not how to cure disease, but how to prevent it.

The whole lecture is replete with eloquent and sound words to the medical student, and equally valuable to the practitioner, when he says that "one doctor publishes in medical journals incessantly and not differently from what is contained in every text-book; and another at a medical society, out of the fulness of his heart rather than out of the fulness of his knowledge, often enlightens his listeners on what they all know well."

The Turkish Bath.—Dr. R. E. Van Gieson, of Brooklyn, N. Y., has an admirable essay (in the *Medical and Surgical Reporter* of October 26, 1872) on "The History and Therapeutic Use of the Turkish Bath." The bath is traced as far back as Baalbec. Arriving at Greece and Rome, the remains of the ancient bath are found even to-day. "Nothing was too costly, no taste was too severe, no gold too precious to expend upon those temples founded for the health of the people. At the time of Cæsar and Sallust, Rome possessed 970 thermæ." The Turkish bath was first established on a sure footing in Great Britain in the year 1856. The pioneer of the Turkish bath movement in America, he says, is Dr. Chas. Sheppard, who first established the bath on Brooklyn Heights in 1863.

Washington University.—Dr. A. B. Arnold has been appointed to the Chair of Materia Medica and Therapeutics in the Washington University of Baltimore.

Vomiting of Snakes.—At the October meeting of the Vermont Medical Society, Dr. Bradford (*Medical and Surgical Reporter*, November 2, 1872) gave the details of the case, lately reported in the papers, of a man in Waitsfield having vomited snakes. The speaker took occasion to learn the exact facts, procured the snakes that were said to be vomited, and presented them before the Society. The patient, male, vomited two species of dead water-snake, about six inches in length; they were ejected in his own home and in the presence of his family, so he says there can be no mistake about the fact of their having been ejected from the man's stomach. The man had no knowledge of having swallowed anything of the kind, nor was he suspicious at any time that his stomach contained any such animals, but he remembers that when at work he was in the habit of drinking from some pools of water in his pasture; in that locality just such snakes abound.

New York Physicians' Mutual Aid Association.—The following gentlemen have been elected officers

of this Association for the ensuing year:—*President*, James Anderson, M.D.; *First Vice-President*, W. W. Reese, M.D.; *Second Vice-President*, T. C. Finnell, M.D.; *Treasurer*, E. H. James, M.D.; *Recording Secretary*, J. S. Monell, M.D.; *Assistant Recording Secretary*, S. Ayres, M.D.; *Corresponding Secretary*, J. C. Hutchinson, M.D.; *Trustees*, Drs. W. N. Blakeman, A. Underhill, C. L. Mitchell, Geo. A. Peters, Erskine Mason, E. Krackowizer, J. Kammerer, J. R. Van Kleek, W. J. Purcell; *Committee on Admissions*, Drs. F. A. Burrall, R. A. Barry, J. Weiner; *Committee on Applications*, Drs. James Anderson, E. H. James, W. W. Reese, A. N. Bell, J. S. Monell; *Committee on Benevolence*, Drs. Jared Linsly, J. C. Peters, Wm. B. Eager, J. C. Halsey.

Union University of the State of New York.—The Union College of Schenectady, the Albany Medical and Law Schools, and the Dudley Observatory, have been incorporated under the above title. The new Institution was inaugurated at Albany, December 23, 1872.

Ovariotomy.—M. Spencer Wells' record of 500 operations, with a mortality of only 25.4 per cent., is a magnificent triumph. Three hundred and seventy-three women, instead of being in their graves or miserable invalids wishing for death, have been restored to health.

In New Zealand, an English Army Surgeon was the pioneer of ovariotomy; in India, medical officers are performing this operation with success.

United States Marine Hospitals.—The report of Dr. John M. Woodworth, Supervising Surgeon U. S. Marine Hospital Service, to the Secretary of the Treasury, gives the subjoined exhibit of work performed in the U. S. Marine Hospitals during the past year: Four hundred and five thousand eight hundred and fourteen days of hospital relief were furnished to 12,302 sick and disabled seamen, being an average of 32_{16} days for each patient treated in hospital; 854 seamen, not requiring rest and treatment in hospital, were relieved by furnishing with medicine, making the total number of seamen relieved, 13,156; 521 deaths occurred, or a fraction less than four per cent. of the number treated.

The total cost of the service for the fiscal year, exclusive of erecting and repairing hospital buildings, was $396,263.11, being an average for each patient of $97\frac{6}{10}$ cents per day, against an expenditure of $453,082.42, or an average of $1.04 per day, incurred in the year ending June 30, 1871.

The department work of the Marine Hospital Service, which was formerly allotted to the Revenue Marine Division, has come under the immediate supervision of the supervising surgeon, assisted by E. K. Whitaker, Reinhold, Springsguth, and Dr. H. W. Santelle. Dr. Woodworth recommends the purchase of a site convenient to the port of New York, and the erection thereon of a pavilion hospital of the capacity of 200 beds. He also favors the erection of other pavilion hospitals; one on Angel Island, in the Bay of San Francisco, and another near Pittsburg, Pa. He particularly favors constructing all of the hospitals of wood, and destroying them after ten or fifteen years, both as a sanitary and economical measure, and building new ones in their stead. The present hospital buildings at Natchez, Miss.; Ocracoke, N. C; New Orleans, and San Francisco, are of no use to the service.

The first two named are located at posts where no applications are received for relief, and the last two are unfit for use.

Edible Earths.—Another kind of edible earth, other than the well-known Lapland variety, is found in Southern Persia, at Kirman, 5,000 feet above Salysteppe. The inhabitants of that district call it *Ghel-i-Ciech*, and use it in various culinary preparations, mixing it up with their food in different ways and forms. It is found in the shape of white nodules with gray spots. These nodules are of various sizes, varying between that of a walnut and that of an apple. Dissolved in water, this earth forms a whitish, impalpable sediment. It is soluble in dilute hydrochloric acid and in nitric acid; also in warm acetic acid. The solution is attended with a strong development of carbonic acid, and leaves a small residue of silica.

Death of the "King of Smokers."—Mr. Klaës, known as "the king of smokers," died recently in Holland at the age of 80 years. During his eighty years of life he smoked more than four tons of tobacco, and drank about 500,000 quarts of beer. By his will his oak coffin was lined with the cedar of his old Havana cigar-boxes, and a box of French caporal and a packet of old Dutch tobacco were placed at the foot of the coffin. His favorite pipe was placed by his side, with a box of matches, a flint and steel, and some tinder, for, he said, "there was no knowing what might happen."

Medico-Chirurgical Society of Montreal.—At the second annual meeting of this society, the following officers were elected for the ensuing year: *President*, Dr. R. Palmer Howard; *Vice-Presidents*, Drs. Reddy and Craik; *Secretary, Treasurer*, Dr. T. G. Roddick; *Council*, Drs. Godfrey, Schmidt, and Fenwick.

Medical Experts.—The subjoined resolutions, adopted May 9, 1872, by the American Medical Association, Section of Materia Medica and Chemistry, have been transmitted for publication, by E. Cutter, M.D., Secretary:—

Whereas, In all capital criminal trials, involving questions of medical jurisprudence, there is an obvious disadvantage in the testimony of scientific experts being made to appear partial and antagonistic, by their being engaged as witnesses upon one or the other side; therefore,

Resolved, That it is the sense of this Association that in important criminal cases, requiring the evidence of medical or chemical experts, the cause of justice will be promoted by the appointment by the court, in every such case, of a commission of experts, empowered to collect all purely scientific testimony bearing on the case, and report upon it to the court by which the case is to be tried.

Resolved, That, by the appointment of such scientific commissions, the present system of summoning chemical and medical witnesses, in criminal trials, might be dispensed with to advantage.

Resolved, That the same recommendation applies also to cases of accusation of surgical or medical malpractice.

Resolved, That the State Associations be requested to bring this matter, at an early date, before their respective legislatures.

Obstetrics in the Sandwich Islands.—Chas. H. Wetmore, M.D., has a readable paper on this subject, in the October, 1872, No. of the *Buffalo Medical and Surgical Journal*, based on his personal observation during a residence of twenty-two years in Hawaii.

When the period of utero-gestation is nearly completed, many of them drink freely of a mucilage prepared from the inner bark of the "Haw" or Hibiscus tree. When labor is fairly commencing, the patient assumes a sitting posture upon a hard pillow of stone, with her husband or some other intimate male or fe-

male friend, resting upon his or her knees, behind her, whose duty it is to grasp her above the abdomen in such a way that he or she can press down with considerable force upon the uterus and its contents, never relaxing this grasp to allow the fœtus to recede; the accoucheur's position is in front, and he or she has but little to do but receive the child; if the case is at all tedious or prolonged they imagine it a "cross birth," or that the child is dead, or something else, never certain what presentation exists until the head or some other part shows itself externally. They seldom allow the cord to be tied or cut until the after-birth comes away.

PHOSPHORUS IN NEURALGIA.—Mr. Bradley, of Manchester, Eng., speaks of having excellent results in some cases of neuralgia, from the administration of phosphorus. He says: "It will not cure every case; but when the neuralgia is accompanied by much nervous waste, as is often the case in nervous and sanguino-nervous temperaments, then it rarely fails to put an end to the paroxysm."

THE annual report of the Librarian of the New York Hospital shows, that although the hospital itself is suspended, the Library, which formed one of its attractions, is still receiving the fostering care of the Governors. During the past year it has been increased by the addition of more than four hundred volumes, including a complete series of "Schmidt's Jahrbucher," "Canstatt's Jahresbericht," and its sequel, "Jahresbericht über die Leistungen und Fortschritte," &c.

Also, "Virchow's Archives," "Bulletin de la Société d'Anatomie," "Pflüger's Journal de Physiologie," and various others of much value. In the various departments of Medicine and Surgery, the additions have likewise been quite numerous, and a liberal appropriation has been made by the Board for the present year.

The Library is conveniently located, at No. 13 West Eleventh street, a few doors west of Broadway; is open daily from 1.30 to 3.14, and may be consulted during those hours by such members of the profession as choose to avail themselves of this privilege. Number of volumes, 9,074.

DR. J. J. CALDWELL, formerly of Brooklyn, has removed to Baltimore, Maryland.

WEST SIDE GERMAN DISPENSARY.—This is a new institution, located at 232 W. 40th st., designed for the gratuitous treatment of patients of all classes and nationalities. The staff consists of Drs. E. Gruening, F. Buchser, L. Limpert, S. Teller, and L. Weyland.

THE TONER LECTURES.—The first of this course of medical lectures in Washington, D. C., will be delivered in February, 1873, by J. J. Woodward, M.D., U. S. A. Prof. C. E. Brown-Séquard, M.D., will deliver the second in April, 1873. The third will be given by Prof. Alonzo Clark, M.D., of New York.

PROF. HUXLEY is the new Secretary of the Royal Society, in place of Dr. Sharpey, resigned.

THE LATE DR. WM. S. REYNOLDS—At a meeting of the Medical Board of the Roosevelt Hospital, held December 16, 1872, the following resolutions were adopted:—

Whereas, Dr. Wm. S. Reynolds, late House-Surgeon to the Roosevelt Hospital, has been suddenly taken away by death while in the active discharge of his duties; therefore,

Resolved, that the Medical Board of the Roosevelt Hospital desire to express to the family of Dr. Reynolds their appreciation of his high character and attainments, and of his faithfulness in the performance of the duties devolving upon him, and to offer their sincere sympathy in this heavy affliction, by which he has been cut off on the threshold of a promising and honorable career.

Resolved, that these resolutions be entered upon the minutes of the Medical Board, and be published in the *Medical Record* and the *New York Medical Journal*, and that a copy be forwarded to the family of the deceased.

ROBT. WATTS, M.D., *Secretary.* A. CLARK, M.D., *President.*

MISSIONARY DISPENSARIES AT MADURA AND DINDIGUL, INDIA, ETC.—The Annual Report of the American Board of Commissioners for Foreign Missions, 1871, gives the following particulars concerning the dispensaries under the charge of American medical missionaries: In the Madura dispensary, under the charge of Dr. Henry K. Palmer, there were treated, during the year 1871, 3,160 new cases. An addition to the dispensary was made, 45 by 17 feet.

Rev. Edward Chester, M.D., reports as follows respecting his dispensary at Dindigul: There has been a total of 12,212 patients, of which number 5,948 were new cases. Patients came from 415 different villages. Erections of suitable buildings have commenced.

In the Manepy dispensary, Ceylon Mission, under the charge of Samuel F. Green, M.D., 1,185 patients were registered during the year. A class of eleven, having pursued a thorough course of medical study, graduated in December, 1871. Dr. Green is also carrying through the press a work on Anatomy, and one on the Practice of Medicine, in the Tamil language, and is preparing a volume on Chemistry, which is well advanced.

Dauphin W. Osgood, M.D., Foochow Mission, treated, in all, between eight and nine hundred patients, and performed twenty-four important surgical operations, which, with two exceptions, were successful. He also treated thirteen cases of attempted suicide by taking opium.

THE LARGEST HUMAN BRAIN RECORDED.—The *British Med. Jour.* contains a statement by Dr. James Morris, that in 1849 a brain weighing over seventy-four ounces was removed from a bricklayer, aged 38, who had died in Guy's hospital from pyæmia, following an operation for hernia. The height of the man was five feet nine and a half inches. "There was the utmost difficulty in obtaining a satisfactory history of him. His wife and his landlady gave different accounts. It seemed that he was a native of Sussex, and had left his village and changed his name, on account of some poaching troubles; that he was not very sober; had a good memory, and was fond of politics. He could neither read nor write." Professor Flint, Jr., in his last volume on the Physiology of the Nervous System, gives Cuvier's brain as the heaviest on authentic record,—64.33 oz.

New Publications.

A HANDBOOK OF THERAPEUTICS, by SIDNEY RINGER, M.D., Prof. of Therapeutics in University College, etc. Third Ed. New York: W. Wood & Co. 1872.

HANDBOOK OF PHYSIOLOGY by WILLIAM SENHOUSE KIRKES, M.D., Edited by W. MORRANT BAKER, F.R.C.S. 8th Ed. Philadelphia: Lindsay & Blakiston. 1872.

Medical Society of the State of New York.

SIXTY-SEVENTH ANNIVERSARY.

FIRST DAY.—MORNING SESSION.

THE Society met at 11.15 A.M., on Tuesday, Feb. 4, 1873, in Perry Hall, Albany; and the meeting being called to order by the President, DR. CORNELIUS R. AGNEW, of New York, the exercises were commenced with a prayer by the REV. DR. CLARK, following which the President delivered his

INAUGURAL ADDRESS.

The President referred to the increase of interest exhibited on the part of the public and the press, in matters which, until a recent period, had been considered to be the almost exclusive property of our profession. Whereas formerly but little or no attention had been directed to removing the avoidable causes of disease, at the present day some of the most important acts of legislation is in that direction. In this, however, we are far behind Great Britain, where the demand for skilled medical officers to carry out the provisions of the law is so great, that one thousand are now needed, the President said, in order to make the Factory Act, alone, effective. Recent communications to our medical journals have shown that, as regards their responsibility of protecting the public against disease, our profession is exposed to the charge of dereliction; and, in order to encourage greater care and attention on the part of physicians with regard to matters belonging to sanitary science, he advised the passage of a resolution requesting the county societies in this State to appoint committees to take account of the subject of vital statistics, and communicate with a standing committee of the State Society, to be established for the purpose. The effect of such a measure would do much to encourage and direct sanitary legislation, and correct the anomaly, which now too often exists, of health-boards being managed in the interests of political organizations. A bill, the President said, had already been introduced into Congress, to provide for the establishment of a National Bureau of Sanitary Science; and he warmly advised its endorsement by the Society.

In regard to the matter of medical education, DR. AGNEW referred to the changes lately made by Harvard University, and recommended that the Society encourage their adoption by the schools in our own State. At the same time, since the present form of organization of our medical colleges has been the result of personal efforts on the part of the gentlemen comprising their faculties, this consideration and others—such, for example, as the pecuniary interest involved, should make the Society cautious in its criticism of institutions in which many of the most respected members of the Society had received much of their training. The college faculties, he assured them, would always be pleased to listen to, and would act upon reasonable suggestions.

The President spoke earnestly in favor of even partial endowment of the medical schools, so that they might be enabled to establish other chairs than those at present included in their curricula; and organize laboratories for the practical study of chemistry, physiology, and pathology. He also spoke of the desirability of modifying the course of instruction, so that students should learn more by recitation, and less from lectures and clinics.

Next the President referred to the views which have been expressed, that the county medical societies ought to be the sources from which delegates should be chosen to attend the State and National associations. He also remarked the tendency which exists to modify our rules of ethics; and impressed upon the Society the necessity for considering impartially all questions of this nature which might be presented to them, although they might sometimes be unpleasant.

The care of the epileptics and paralytics in our State deserves, he thought, most careful consideration on the part of the government. In this, also, we are quite behind England. In London alone there are several hospitals for this class, whereas, with the exception of the one on Blackwell's Island under the care of the Commissioners of Public Charities and Correction, there are none in this State; and epileptic and paralytic patients are either kept as common paupers in the county houses,—where they are neglected and are a constant source of annoyance and trouble,—or are confined in lunatic asylums, where they do not belong, and where they occupy space which is urgently needed for the legitimate inmates of such institutions. He recommended that the Society should appeal to the State to either build separate hospitals for them, or make additions to the county houses of sufficient size for their accommodation and classification.

Lastly, he hoped the Society might impress upon the authorities the justice of protecting the indigent poor of the State from harsh and too rigorous treatment. While nothing should be done to encourage voluntary pauperism, regard should be had for those who are helplessly and often undeservedly poor.

Before closing he reminded the Society of the resolution passed at their last meeting, requiring those who undertake the private instruction of students in medicine to exact of them that they shall first procure of the censors of their county society a certificate of fitness as regards preliminary training.

On motion of DR. VANDERPOEL, such portions of the President's address as required action on the part of the Society, were referred to a committee of three, to be appointed by the Chair.

On motion of DR. FRAZIER, a committee was appointed to invite the Governor, and such members of the Legislature as were physicians, to take part in the meetings of the Society.

COMMITTEES.

The President then announced the following committees:

On Credentials—DRS. W. H. CRAIG, of Albany; A. L. SAUNDERS, of Brookfield; and C. E. RIDER, of Rochester.

Business Committee—DRS. ELLSWORTH ELIOT, of New York; J. V. KENDALL, of Baldwinsville, and G. H. HUBBARD, of Lansingburgh.

Committee on Arrangements and Receptions—DRS. J. V. P. QUACKENBUSH and WM. H. BAILEY, of Albany, and DARWIN COLVIN, of Clyde.

Committee on Medical Ethics—DRS. THOS. HUN, of Albany; E. R. SQUIBB, of Brooklyn, and D. B. ST. JOHN ROOSA, of New York.

Committee to Invite the Governor and Legislators—DRS. ROBERT FRAZIER, of Camden; LEWIS POST, of Lodi, and THOMPSON BURTON, of Fultonville.

MISCELLANEOUS BUSINESS.

Dr. G. W. Barr, of Titusville, Delegate from the Pennsylvania State Medical Society, was then introduced. Dr. Barr formerly resided in this State, and, during our late war, served as surgeon under a commission from Dr. Vanderpoel, then Surgeon-General of the State.

Dr. Eliot, Chairman of the Business Committee, announced that Dr. Wm. C. Wey, of Elmira, would read for Dr. Geo. Burr, of Binghamton, who was absent, a paper based upon "A Case of Occlusion of the Femoral Artery from Fracture of the Femur, followed by Mortification and Amputation." In this case, fracture of the femur occurred at the junction of the middle and lower thirds. The limb was placed upon an inclined plane, with loose dressings. Next day the leg was found to be cold, free from swelling, pale, and without pulsation in its vessels. At a later period the skin became gangrenous and, an irregular line of demarcation having formed, was amputated through the knee. The patient recovered. Examination of the limb showed that the gangrene depended upon cutting off the circulation through the artery, and not from the cause so frequently blamed when mortification follows upon fracture, viz:—tight bandaging. It was owing to the *medico-legal* bearing of the case that it was reported.

Dr. Bridges, of Ogdensburg, read a paper entitled "Disease of the Left Ovary, resulting in fatal Hemorrhage." The patient was estimated to have been about six weeks pregnant. A solution of continuity in the tissue of the organ named was the only source discovered from which the hemorrhage could have taken place into the abdominal cavity, which, with the Fallopian tube, was filled with blood.

The following papers were read by title, and followed the usual course:—"Obituary Notice of Dr. Darius Clark," by Dr. B. F. Sherman.

"Hernia," by Dr. J. H. Pooley, of Yonkers.

"The Effects of Railroad Travel on the Health of Women," by Dr. Ely Van der Warker.

"Idiopathic peritonitis," by Dr. Joseph Lewis.

Dr. D. B. St. John Roosa, of New York, read portions of a paper entitled, "History of the Progress of Otology," which gave an excellent idea of the very rapid advance which has been made in this branch of surgery.

Dr. H. Knapp observed that the paper, to which he had listened with the greatest interest, had mainly been devoted to practical purposes, which was eminently proper, considering the character of the Society. There had been, however, one chapter worked out, of late years, which he thought to be one of the most sublime triumphs made in the province of medicine during that period; that was, the anatomy and physiology of the cochlea. Long ago it was known that the pitch of sound depended upon the number of vibrations, but it was left for modern investigations to show us what it was in the ear which perceived the number. Helmholtz said, some years ago, that Corti's organ, now called the *zona arcuata*, was divided into arches of different densities, and, perhaps, different lengths, so that they could vibrate at different rates of velocity, and so, he said, when a sound is produced by an instrument, it would put in sympathetic vibration some of the arches.

An obstacle to this theory was the absence of Corti's organ in birds. Anatomists have found that the last filaments of the acoustic nerve pass underneath the arches of Corti and unite with certain cells, which are now called "hearing-cells," and are stretched between two tight membranes, one of which is made up of dense stripes of tissue, and called the *zona pectinata*. These stripes are connected by a cement-like material, less dense in structure, so that they can, to a certain extent, vibrate independently. To those hearing-cells and their *annexa*, the last filaments of the auditory nerve have been traced, and the mode by which they are acted upon by sound is supposed to be this: A sound being produced outside, easily puts into vibration one of these cells, or its bristle-like continuation, and in so doing puts into co-vibration the nerve filament connected with it. Thus far it has been traced anatomically; but the theory is more than hypothesis, it is based upon anatomical facts in connection with physiological experiments. In certain *amphibia* the "hearing-bristles" are outside the body, and these animals have been placed in a vessel filled with water, and observed with a microscope while a loud sound has been produced, and it has been seen that certain tones produced vibration of certain sets of hearing-bristles, and of no others; so that a modified theory of Helmholtz is now in harmony with our present knowledge.

As to some of the practical applications of this, it may readily be imagined that the hearing organ might show deficiencies of this delicate apparatus, and one of them may be illustrated by the working of a double-stringed piano. Sometimes the two sets of strings may not be in unison, one being tuned a little higher than the other. So people may hear double—that is, the same sound will appear to one ear higher or lower in pitch than it does to the other, according to the relaxation or tension of the *zona pectinata* of the diseased side.

There are other and rarer cases, of which Dr. Knapp had seen a few, in which, besides hearing the original sound, the patient also hears two, three, or even four neighboring sounds, though the latter are less distinct. This may be explained by the cement between the bristle-like rods being thickened by exudation, or other morbid processes which lead to sclerosis, so that the bristles cease to vibrate independently. This condition may be called *diplacusis monauralis*, whereas the variety before mentioned is termed *diplacusis binauralis*.

With regard to the practical importance of diseases of the labyrinth, the doctor mentioned one point for the consideration of the Society, viz.: Some acute affections—cerebro-spinal meningitis for example—produce disease of the labyrinth, destroying the hearing power totally. Nothing is seen in the organ of hearing, however, on physical examination, and the patient remains deaf after his recovery from the disease. At the beginning of the disease there may be some slight catarrh of the pharynx and middle ear, which disappears, leaving an incurable deafness. When such cases come before us after the recovery from the general disease, and no sound is perceived by the patient, we may say with certainty that they are not amenable to treatment.

Dr. Roosa said he would be sorry to consume the time unnecessarily, but wished to speak two or three minutes on a point raised by Dr. Knapp in regard to the disease occurring in cerebro-spinal meningitis. He hoped that practitioners who have the opportunity would make *post-mortem* examinations with reference to the condition of the ear. We are painfully at fault in regard to our knowledge as to what *does* occur in the ear, in this disease, and he was inclined to expect with Voltolini that cases of inflammation of the labyrinth are sometimes mistaken for diseases of the meninges, when what would be proper treatment for the latter

would prove destructive to any attempts at treating the ear trouble—as, for instance, the application of ice-water to the head.

He only wished to ask his brethren and fathers in the profession if they would look a little more closely into this matter, or give aural surgeons an opportunity to see the *post-mortem* condition of these parts.

Dr. Wm. B. Alley then read a paper on "The Ultimate Results of Nerve Injuries in Gunshot Wounds." A point of special interest in the paper, which was based on the observation of over thirty cases, was the statement, that a man who had received a gunshot wound of the face had profuse perspiration of one cheek during mastication.

Dr. Wm. M. Chamberlain, referring to this fact, said the subject of unilateral perspiration had recently received considerable attention from Dr. Sidney Ringer, of London, and an article from him on the subject had recently been published in "The Practitioner." Dr. Ringer had signal success in treating some of these cases with sulphate of atropia.

Dr. B. F. Sherman said that ten years ago a member of his own family had, as the result of typhoid fever, inflammation of a parotid gland, which terminated in suppuration and destruction of apparently all of the gland. In this case precisely the same condition existed as in the case mentioned by Dr. Alley. When the person takes food or masticates at all, perspiration stands in large drops on that side of the face, or trickles from it.

Dr. Knapp wished to know if the excessive sweating was confined to the numb side, which Dr. Sherman said he remembered distinctly to have been the case. In fact, it was never dry. Dr. Knapp said that he remembered a case—one-sided facial paralysis—from aural disease, in which this side of the face did not perspire. He had explained this fact for himself by the opinion of *Claude Bernard*, that secretions in general are under the control of the motor nerves. The profuse perspiration on the affected side, in Dr. Sherman's case, he was disposed to attribute to hyperæsthesia of the nerve due to the irritation of a cicatrix, which might be deeply seated.

The Chairman of the business committee asked if the Committee should take cognizance of any paper presented by an invited guest, and Dr. Roosa proposed the following:—

Resolved, That the Committee be requested to consider papers that may be presented by invited members of the Society, and cause them to be read, if thought expedient.

Dr. Frazier moved, as an amendment, that such papers take the course that they would, if emanating from a delegate or permanent member; which resolution, with amendment, was adopted.

The President then announced the following *Committee on the President's Address*:—

Drs. S. O. Vanderpoel, J. P. Gray, and Ernst Krackowizer.

The Chairman of the business committee reported no further business for the morning, but said that the large number of papers which had been handed in to be read, required that gentlemen who proposed to present papers should hand them to the committee at once, with a statement of the probable time they would consume.

The Committee on Credentials presented a list of invited guests.

Dr. Craig, of Albany, moved that the two contesting delegations from Niagara County, and their papers, be referred to the committee on medical ethics.—Carried.

The Society then took a recess until 3 P. M.

FIRST DAY.—AFTERNOON SESSION.

The meeting was called to order at 3 P.M.

The President in the chair.

Dr. J. W. S. Gouley, of New York, read a paper on Perineal Lithotrity, an operation practised by Dolbeau, of Paris, since 1862, by which the membranous portion of the urethra is opened; the prostate and neck of the bladder dilated instead of being cut, and a large stone crushed and the fragments immediately extracted; the whole being done at one operation.

An incision through the perineum $\frac{13}{16}$ of an inch in length, commencing at the anal margin, is dilated by an instrument which Dr. Gouley exhibited, and which is afterwards passed into the bladder through the prostatic portion of the urethra. The tissues having been stretched to the diameter of twenty *millimetres*, the stone is to be extracted entire, provided it does not exceed two *centimetres* in diameter; in case it is larger it is to be crushed and the fragments extracted.

For the crushing of the stone, Dr. Gouley recommended forceps which are modeled from those recently described in The Medical Record and constructed by Mathieu, of Paris.

Three cases were reported by Dr. Gouley as having been operated on by him by this method, with the most favorable results.

Dr. Ernst Krackowizer, of New York, in speaking of this mode of operating for stone, said that it was always a strong argument in favor of an operation if an operator chanced to stumble into methods which have been foreseen by others. This had been the case with himself as regards this procedure, and he went on to relate two cases:—

A lieutenant of volunteers had been shot through the pelvis; the ball entering the sacrum and emerging above the pubes. Fæcal matter and urine had escaped from both wounds, and small fragments of bone had passed *per urethram*. Some of these fragments of bone became lodged in the membranous portion of the urethra, and were not dislodged, despite all the ingenuity brought to bear upon them. In this emergency he came to Dr. Krackowizer, who performed the operation of cutting into the membranous portion of the urethra, and by this means the bones were removed. The doctor made an effort to pass his finger into the bladder, and was amazed at the facility with which it could be done—he fairly "walked" into the viscus. Examination detected the presence in this organ of a large phosphatic calculus, which was easily broken and removed. This centre of the body was a spiculum of bone. No untoward results followed the operation.

At the New York Hospital, an operation had been made for the removal of calculus, in which this mode of operating was adopted; the stone was seized with forceps and efforts made for its extraction. This was rendered difficult, as was afterward discovered, by the irregular form of the calculus which caught against the base of the bladder. Its final extraction caused a laceration of the prostate body, which did not, however, involve the neck of the bladder. Dr. Krackowizer thought highly of the method proposed by Dr. Gouley.

Dr. J. C. Hutchinson, of Brooklyn, also spoke favorably of it, 1st, on account of the small opening required; and 2d, for the reason that the prostate is neither torn nor cut. He did not consider it important to limit the incision through the tissues to the $\frac{13}{16}$ of an inch, as recommended by Dr. Gouley, but considered that no harm would come from a much larger one if, thereby, the ease of operating could be facilitated.

One disadvantage in this mode, is the length of

time required to remove a stone at one sitting, by breaking it, and washing out the fragments; he would himself be in favor of nicking the prostate and removing the stone entire, rather than permit a delay of thirty minutes.

The PRESIDENT then announced the *Committee on Nominations*, as follows:—

First district, Dr. J. C. Hutchinson; second district, Dr. J. Foster Jenkins; third district, Dr. H. B. Whiton; fourth district, Dr. Alexander Ayres; fifth district, Dr. Alonzo Churchill; sixth district, Dr. Wm. C. Wey (chairman); seventh district, Dr. Caleb Green; eighth district, Dr. H. W. Dean.

DR. S. O. VANDERPOEL, Chairman of the committee appointed last year to consider the question of changing the time for meeting, read the following report:—

THE Committee appointed to consider the advisability of changing the time of meeting report, that in the consideration of this question it is natural to inquire why the present time of meeting was originally selected, and whether any objections exist to the proposed change.

"The Society now numbers so many years that it has been difficult to obtain the desired information. Several members who were interrogated were unaware of any particular reason which either now, or formerly, rendered the present time of meeting particularly desirable. One or two expressed an individual preference, as it afforded a slight relaxation during the more busy period of professional cares. From reliable information, however, it may be stated, that the present time of meeting was originally selected in order that the Society might hold its meetings during the sessions of the State Legislature, and that physicians who were legislators might be present during the meetings of the Society.

"If it be objected to the change under consideration, that the Society and the Legislature ought to hold their meetings at the same time, in order that any subjects which require legislation might be more easily considered and acted upon, we may reply that such subjects could be more fully discussed and matured if the Society met at a date previous to the session of the Legislature. In short, it is believed there are no insuperable objections; or if so, they have not been presented to the notice of the committee. But, if there are *no objections* to a change in the time of meeting, there are considerations which *favor* such a change very decidedly.

"The inclement season of the year in which the session is now held, makes traveling difficult, disagreeable, and in some parts of the State almost impossible. As an illustration of this fact it may be mentioned that at the last meeting of the Society (1872), when this subject was considered, one of the members stated that he had been 'snowed in' during a previous attempt to be present at the annual session.

"Besides, the hotels are crowded, and it is difficult to obtain accommodations; the better halls for public assemblage are occupied by the Legislature, and the State Medical Society is obliged to hold its sessions in rooms which are very unfavorable for the transaction of business.

"One other consideration will be brought forward, in the language in which it was originally presented in 1870, in the inaugural address of the President, Dr. Jas. P. White, of Buffalo, to this Society:—

"'Perhaps it is inexpedient to change the time of holding the annual meeting of the Society, but we should not shut our eyes to the fact that it now occurs during the delivery of the courses of lectures in all the Medical Colleges of the State; thus rendering it exceedingly difficult, if not impossible, for the professors in these institutions to be present. Aware that this time is fixed by a law of the State, and that in many respects it is most wise that it should remain unchanged, simply remarking that it excludes the teachers in the schools, from attendance, and deprives us of their valuable assistance in our deliberations, I leave the matter, without suggestion, in your hands. The fall season presents more advantages than any other, as a time for the annual meeting. There is, as a rule, a comparatively healthy period in the latter part of September, when practitioners would find it more convenient to be absent from their patients than in the busy season of winter. Then, travel is also agreeable and easy, the hotels in Albany are not overcrowded, and there would be a better choice of rooms for assemblage.'

"Of the Medical Colleges throughout the State, but one meets before October, and that is in Albany.

"In fact this period seems peculiarly fitted to the different wants of practitioners in all parts of the State, and, without designating a special day for the annual meeting of the New York State Medical Society, until the subject has been further discussed, your committee would suggest that the day selected should be from the latter half of September.

"All of which is respectfully submitted."

S. OAKLEY VANDERPOEL.
ALEXANDER HUTCHINSON."

On motion of Dr. Eliot, the report was accepted, and the discussion of it made a special order of business for the evening session, after the reading of a report by Dr. Squibb.

DR. T. ADDIS EMMET read a paper on "Laceration of the Perineum, involving the Sphincter, and an Operation for Securing Union of the Muscle," which paper will appear in full in a subsequent number of THE MEDICAL RECORD.

DR. E. H. PARKER, of Poughkeepsie, read the history of a case of "Dislocation of the Tarsus from the Astragalus," and exhibited the specimen.

DR. E. M. MOORE, of Rochester, read a paper on "Intra-Capsular Fracture, Illustrated by Two Cases," of which he presented specimens.

DR. GURDON BUCK, in discussing the paper, stated that intra-capsular fracture of the cervix femoris was not of so unfrequent occurrence as has been supposed by many surgeons, and was by no means confined to an advanced period of life; one case in a person of twelve, and in others of from seventeen to eighteen years of age, having been recorded. An army officer, between thirty-five and thirty-six years old, had recently been treated for this injury in the Presbyterian Hospital, in New York. Dr. Buck considered that the accident invariably resulted from a fall upon the trochanter, or force applied in an analogous way, and this force may vary in degree so as to be just sufficient to fracture the bone without causing displacement, or the fragments may be impacted and displaced, and so retained by the periosteum and surrounding tissues. Any simple method of diagnosis ought to enable the surgeon to distinguish this from other fractures or dislocations. A slight survey will exclude fractures of the shaft, and the absence of abduction or adduction of the limb will exclude dislocation. The limbs will, most likely, lie parallel with each other, and there will be a loss of motion. In making a comparative measurement of the length of the limbs, the ankles should not be brought together, but the tape should be used. To show how easy it is to make a mistake in measuring by

the former method. Dr. Buck said that one of his old pupils was going with Mr. Ericsen through the wards of the latter's hospital service, and had his attention directed to a case of fracture of the femur which had about recovered, as Mr. Ericsen said, with no shortening, in proof of which the ankles were brought together. On measuring in the usual manner, however, with a tape, a considerable shortening was demonstrated to exist. If, in a supposed case of fracture, the surgeon finds more or less eversion of the foot, and inversion is arrested when the toe is in a direct line; if pain is referred to the region of the hip-joint; if there is flattening of the affected side, he may infer the existence of this fracture, and is not justified in trying to produce crepitus, as this will break up the condition of impaction which favors adhesion.

Two or three cases were related by the speaker, to show that absorption of the extremities of the bones may take place in the process of recovery, and considerable shortening may be apparent at the end of a few weeks, where none existed at the time of injury.

Dr. A. T. Douglass, of Ulster County, called attention to the fact that the two anterior superior spinous processes of the ilium may not be symmetrical, and many are thus led to error in measurement; and related an instance in which this had been the case.

Dr. A. N. Bell, of Brooklyn, mentioned a case which he thought controverted the statement made by Dr. Buck, viz: that intra-capsular fracture was *always* the result of direct violence.

A man stepped into an elevator which was not secured, and fell with him to the bottom of the shaft, a distance of about forty feet. The man maintained an erect posture until the elevator reached the bottom, and then fell. Dr. Bell believed the fracture of the cervix femoris, which resulted, to have been produced by the force transmitted through the shaft of the femur.

Dr. E. M. Hunt, delegate from the New Jersey State Medical Society, was introduced, and made a few very happy remarks.

The Secretary read an invitation from the Medical Society of the County of Albany, requesting the pleasure of meeting the members, delegates, and invited guests of the State Society, on Wednesday evening in Perry Hall, immediately after the President's address; which invitation was accepted.

The following papers were read by title, and, with the others, above enumerated, referred to the publishing committee.

"Case of Fatty Tumor of the Abdomen," and another of "Senile Hypertrophy of the Prostate Gland," by James S. Bailey, M.D. "Unusual Case of Inflammation of the Urinary Organs," by S. T. Clark, M.D.

The Society then adjourned until eight o'clock.

First Day.—Evening Session.

The Society met at the hour appointed, and was called to order by the Vice-President, Dr. B. F. Sherman, who occupied the Chair.

Dr. E. R. Squibb, of Brooklyn, chairman of the committee on the Pharmacopœia of the United States of America, then read their report, and made an exhaustive review of the last edition of the work.

The report was, on motion, accepted.

A paper, by Dr. George Douglass, on "Dropsy after Scarlatina," was read by title and referred; and the Society proceeded to discuss the suggestions made by the committee on changing the time of meeting. After an hour spent in argument in favor of the change; reading of by-laws, and explanation of the charter of the Society—during all of which it was apparent that everybody desired a change, but nobody could agree upon a time of meeting—the meeting was unanimously adjourned until the next (Wednesday) morning at nine o'clock.

Second Day.—Morning Session.

The Society met at a quarter past nine o'clock, and the meeting was opened with prayer by the President.

After the reading and adoption of the minutes of the sessions of the previous day, the Secretary, for Dr. Oliver White, chairman of the committee on by-laws, read a report, which was adopted. The Secretary also stated that he had received letters from Dr. Henry I. Bowditch, of Boston; Dr. C. E. Brown-Séquard, of New York; Dr. Wm. Brodie, of Detroit, and Dr. E. M. Snow, of Providence, R. I., all of whom regretted their inability to be present at the meetings.

Dr. Fessenden N. Otis, of New York, then read a paper on "Strictures of the Male Urethra, with Results of Operation with the Dilating Urethrotome," in which he brought prominently to the notice of the Society the fact of the dependence of gleet upon urethral stricture of large calibre, and presented a new instrument, devised by himself, for dividing such strictures.

Dr. Otis claimed that, in most cases, these strictures, by offering an obstacle to the out-flowing urine, and by retaining behind them a few drops, become a constant source of irritation to the urethra, and keep up a discharge which would otherwise cease spontaneously. The indication in such cases he thought to be clearly to completely divide the stricture and restore the urethra to its normal calibre. Having found all the instruments heretofore in use ineffectual on account of the large size of these strictures, Dr. Otis was led to devise one which combines both dilatation and incision. The main advantages claimed by the author for his instrument were:

1st. That on account of the width to which the blades can be separated, it is adapted to deal with strictures of the largest calibre, which no other instrument can divide.

2d. That by the means of its indicator, the exact seat of stricture can be determined, and only the contracted portion of the urethra divided (the blade becoming hidden as soon as it has severed the constricting bands).

3d. That as the knife is brought to bear against a tissue already made tense, the incision is more thorough and almost entirely painless.

4th. That subsequent dilatation by the use of steel sounds to prevent recurrence of the stricture is unnecessary after healing of the incision has taken place.

The author cited a number of cases upon which he had operated with the best results, and which, many months after the operation, presented no gleety discharge, nor could contraction of the urethra at any point be discovered; he insisted very forcibly upon the advantages derived from combining dilatation and incision, the cure being permanent, although subsequent dilatation by the use of steel sounds may not be resorted to; he condemned the use of the endoscope in the treatment of chronic urethral discharges, the improvement having, in his observation, proved fallacious, the disease returning readily from inappreciable causes.

For the detection of strictures of large calibre Dr. Otis gave a very decided preference to the metallic silver-plated bulbous sounds for the straight portion, and the olive-pointed bougies for the curved portion of the urethra, and dwelt very forcibly upon the in-

possibility of detecting slight constrictions with the ordinary steel sounds. He ascribed the ease with which multiple strictures of the urethra are now made out, to the improvement in the instruments at our command, and showed that, whereas contractions of the urethra at more than one point in the same individual were formerly looked upon as a rare occurrence, the latest observers have found it to exist in most cases, he himself having clearly demonstrated the presence of as many as six distinct strictures in the same urethra.

In evidence of the happy results following operations by the dilating urethrotome, Dr. Otis presented the testimony of several surgeons (Drs. Sands, Gouley, and Weir), who, at his request, examined patients operated upon a few months previously. These gentlemen found that in every case the urethra had been restored to its normal calibre, throughout.

The special advantages claimed for this method, and the instruments employed, above those of Thompson, Holt, and Maisonneuve, are, that they completely restore the urethra to its normal calibre; prevent the recurrence of close strictures, and rid the patient of the troublesome discharge and irritation resulting from them.

Drs. Gouley and Newman, of New York, made a few remarks on the subject of strictures; after which Dr. D. B. St. John Roosa arose to a question of privilege, saying that a pamphlet which had been distributed among the members since the commencement of the meeting, containing a written foot-note, charged the Medical Department of the University of New York with continually selling and issuing diplomas "to persons who are known to be of the worst possible morals, and to well known fraudulent and criminal advertisers," which was utterly false; had been so proven in every case in the columns of The Medical Record; and that he, as a *teacher* in the college, and in behalf of the council, of which he was a member, denied the truth of the statements. He wished to say, furthermore, that the author of the pamphlet had been expelled from the New York Pathological Society, for a personal attack made by him upon the president of the Society—Dr. Alfred L. Loomis, a professor in that school.

Dr. James R. Leaming, of New York, read a portion of a paper on "Plastic Exudation within the Pleura."

Dr. Charles H. Porter, Treasurer, made his annual report, which was referred to an auditing committee, appointed by the Chair,—viz: Drs. J. V. Cobb, H. Corliss, and ——Staats.

Dr. Ellsworth Eliot offered the following resolution:—

Resolved, That candidates elected to permanent membership who neglect, for one year from the date of their election, to pay the fee required by our by-laws, shall forfeit their rights as permanent members.

The resolution was amended so as to read "a year from the date of notice of their election," and so adopted.

Dr. A. N. Bell, of Brooklyn, then read the report of the committee on hygiene, consisting of a paper on the "Quarantine Establishment of New York."

Dr. Frazier, of the Committee on inviting the Governor and certain members of the Legislature to participate in the meetings of the Society, reported that they had performed the duty.

Dr. A. B. Burger, of Saratoga county, presented to the Society a kidney which had undergone cystic degeneration, and weighed about three pounds. The description of the case was referred to the publishing committee.

Dr. Wm. T. Lusk read the greater part of a paper on "The Pathology of Labor-Pains," and was followed by Dr. Gurdon Buck, who presented to the Society some plaster casts of the stages in an operation for the reconstruction of an under-lip.

The committee for auditing the Treasurer's report, reported that it had been found to be correct.

The following *Delegates* were introduced to the Society:—Dr. M. H. Eddy, of Middleburg, Vermont, delegate from the Medical Society of the State of Vermont; Dr. John J. H. Love, delegate from the New Jersey State Medical Society, and Dr. S. L. F. Simpson, of Concord, N. H.

Dr. Louis A. Sayre read a paper on "Diastasis of the Head of the Femur, and Formation of an Artificial Hip-Joint," exhibiting a specimen in illustration.

Dr. J. V. P. Quackenbush, of Albany, read a paper on "Hydrorhœa," most of which was composed of extracts from recent journals.

Dr. E. R. Squibb, of the committee on medical ethics, made the following report on the matters relating to the Niagara County Medical Society:—

"The Committee on Medical Ethics, to which was referred the question of the admission of delegates from the Niagara County Medical Society, reports, that so far as they can make out, the facts of the case are as follows:

"At a meeting of the Niagara County Medical Society, held January 3d, 1871, nine of the forty members being present, a resolution was passed declaring the Society disbanded. Immediately thereafter, these members organized themselves into a new Society, bearing the same name and under the same officers. The reason alleged for this action was, that under the old organization it was not possible to enforce discipline among the members. The delegates named by this self-constituted body presented themselves for admission into this Society at the meeting of February of 1871. At the same time a protest, signed by Doctors Taylor, Fasset, and others, against the recognition of this new organization, was presented. The following report was finally made by the Committee on Medical Ethics, to which the matter had been referred, and was adopted by the Society (p. 79, 1871).

"At a meeting held June, 1871, they did reorganize, in accordance with the recommendation, and adopted a constitution and by-laws which had been submitted to Dr. White, as Chairman of the Committee on By-laws, and approved by him.

"They therefore claim to be truly the Niagara County Medical Society; constituted according to the recommendation of the Society; subsequently recognized by it in various ways, and entitled to representation.

"It is claimed, however, by a number of the original members of the Society, that the reorganization is rendered invalid by the action of the President, who subsequently declared under oath, as President, that the Niagara County Medical Society was organized in 1871, and that the Society organized in 1823 was disbanded in 1871; that they were a new society, and totally repudiated the old organization.

"Acting on this assumption, they issued a call for a meeting of the members of the Niagara County Medical Society, and at this meeting, held the first Tuesday in June, 1872, elected a President and other officers, and now ask recognition of the Society.

"Without entering into an argument which would consume too much of the valuable time of this Society, your committee will merely state the conclusions at which they have arrived.

"The act of disbanding the Society was null and void,

"That in acting under the advice of this Society in June, 1871, the Medical Society of Niagara County of 1823 was again in full operation.

"That although we think Dr. Clark was in error in stating that the Society dated from 1871, and not 1823, yet this statement could not render the previous proceedings invalid. We therefore propose the following resolution:

"*Resolved*, That this Society recognizes the organization in Niagara County, of which A. G. Skinner is now President, and J. B. Buchner, Secretary, as the Niagara County Medical Society, and will receive Rexford Davidson and Charles N. Palmer, delegates regularly appointed by said Society."

THOMAS HUN,
Chairman of Committee on Ethics.

Albany, Feb. 5th, 1873.

The report was unanimously adopted.

DR. A. VANDERVEER presented an obituary of Dr. P. Van Olinda, which was read by title and referred to the publishing committee.

The Society then took a recess until 2.30 P.M.

SECOND DAY.—AFTERNOON SESSION.

The meeting being called to order by the President, the following delegates made their reports:—

Dr. Douglass, delegate to the Connecticut State Medical Society.

Dr. Corliss, delegate to the Maine Medical Association.

Dr. Newman, delegate to the New Jersey State Medical Society.

DR. A. JACOBI, of the committee on foundling asylums, which was continued from the previous year, made the final report, and DR. JOEL FOSTER, who was last year added to the committee, read a minority report. The former was accepted by the Society, and adopted as an expression of their views on the subject.

DR. KENDALL, of Baldwinsville, offered the following:—

Resolved, That the By-Laws of this Society be altered, so that section eleven, of paragraph three, shall read as follows:—

¶ 3, § 11. At the annual meeting, at the close of the morning of the first day, the members of the Society shall be organized into eight committees, by Senatorial districts, as established by the law of 1836, the members present from each district constituting one committee, each of which shall elect one member; the members thus elected, with one appointed by the President, as chairman, shall constitute the committee on nominations.

On motion by himself, it was laid on the table for future discussion.

DR. STORCK, of Erie County, offered the following resolution:—

Resolved, That the bill entitled "An Act relative to the Medical Laws of the State of New York," passed by both houses of the Legislature of last year, but vetoed by Governor Hoffman, meets with the approval of this Society.

Resolved, That a committee of three be appointed by the Chair to take all necessary steps to secure the passage of said act by the Legislature during its present session.

DR. STORCK hoped the bill might be made a law, as in his section of the country there was urgent necessity for protection against the practices of unprincipled quacks.

DR. VANDERPOEL said:—"I scarcely know the points of this law, but on general principles I am opposed to this species of legislation. I think the less the Legislature bother with our diplomas, and the less we throw ourselves upon their protection, the better for our profession. I have never yet seen the time when men who were well educated in their profession, and who appreciated fully the responsibilities and duties conferred upon them, have not had the confidence of the public; and you generally find that the class of people who throw themselves upon the protection of the Legislature, are the very weak brethren in the profession. I do not care whether I have a parchment or not. If I cannot demand compensation for my services because of their value, I would rather sink than throw myself behind the barrier of a legislative enactment. We went through this very thing twenty years ago—there is not one here but knows it—the Legislature abolished all these barriers; and I should be very sorry to see a retrograde movement in this respect." [Applause.]

DR. SQUIBB remarked:—"There is another point of view which I beg to throw out. There is a certain class in the community who will employ quacks, and we cannot control them. We know that in the case of abortionists the more secret they are, the better is their practice. Quacks cannot be brought within legislative control unless our police establishments are made very much more effective than they ever have been. I think medicine must police itself and legislate for itself; and I think its only safety lies in its so doing."

DR. E. M. MOORE said:—The gentleman from Buffalo is probably unaware of the stage we have passed through, as Dr. Vanderpoel has just said. I think it was in the year 1844,—it sounds a good way back,—I was the youngest member of a committee of three, to petition the Legislature to abolish the laws for the purpose of enabling physicians to collect fees for medical services. We did this just at that time, with one of our members in the Senate of the State, for the purpose of getting rid of one of the most vexatious, pestilential set of wretched quacks, that it has ever been my misfortune to come in contact with. They were making a handle of the fact that we had the power to go on and practise, and collect our fees, while they could not; and for that reason all their fees must be paid in advance. And, of course, it was so specious a thing that no argument could be brought against it; and we felt the annoyance of it so much as to request the Legislature to abolish the law; and we have never regretted doing it. It was undoubtedly a good move, and if we could cut free from the Legislature entirely, I should be satisfied. For that reason, Mr. President, I think that we should not entertain any such project whatsoever—give it the go-by.

"Again, I will remind the gentleman, whom I recognize to be a German—indeed he alludes to the fact that he is a German—that some of the most outrageous quacks have come from Germany—homeopathy, hydropathy, and mesmerism. Now there is no mind at present, upon the face of this planet, that controls human thought more perfectly than the German mind; it is really in advance of the world, but it also, sometimes, seems to take long strides in queer directions; and we must recollect also that there is no country in the world where the business of legislating exactly how a man shall go to bed; and how he shall get up; how he shall eat his breakfast; how he shall do everything, is carried to such perfection as it is in Germany. And just through all this, and in spite of it, these things have grown up and have been transplanted into this country, and now we are suffering from them; and

therefore the poorest remedy we can have will be from the Legislature of the State of New York. [Applause.]

On motion, the resolutions were laid on the table.

Dr. Robert Newman offered the following:—

Resolved, That when we adjourn, we adjourn this annual meeting to the fourth Tuesday in September, for the transaction of executive business.

Resolved, That after this year the annual meeting be held at Albany, on the fourth Tuesday in September.

Resolved, That the Secretary be authorized to make this amendment of the by-laws legal, if legislation is required.

The discussion of the previous evening was, in part, repeated; but finally a motion was carried which laid the whole subject on the table.

Dr. B. L. Hovey read a report of five cases of Colles' fracture.

Dr. J. P. Gray exhibited twenty micro-photographs of diseased brain tissue, made under the supervision of Dr. Hun, the pathologist of the Utica asylum.

Dr. H. Knapp made some remarks on the subject of "Hemiopic and Sector-like Defects of the Field of Vision, and their Connection with Diseases of the Heart and Brain," illustrating it with diagrams.

Dr. J. P. Palmer, of Ontario County, read a paper on Spotted Fever.

Dr. Corliss read a biography of Dr. Barent P. Staats, of Albany.

The following papers were read by title, and referred to the publishing committee; as were the others above mentioned:—

"Three Cases of Abscess and Pelvic Peritonitis, from Ulceration of the Appendix Vermiformis, relieved by Operation," by Dr. R. B. Bontecou, of Troy. "Complete Dislocation of the Fourth Dorsal Vertebra, Forwards," by Dr. Graves, of Steuben County. "On the Use of Atropine in some Diseases of the Eye," by Dr. Edwin Hutchinson, of Utica.

Dr. Babcock reported that the Censors of the Eastern District had examined E. V. Stryker; found him well qualified to practise medicine, and recommended him as a proper person to receive a diploma from the Society.

The meeting then adjourned until eight o'clock, when the Society met in the Assembly chamber to listen to the President's address.

Following the address the members, delegates, and invited guests were received in Perry Hall by the Medical Society of the County of Albany, where an address was delivered by Mr. W. H. Bogart, correspondent of the *World*, and the company partook of a very elegant supper.

THIRD DAY.—MORNING SESSION.

The President called the meeting to order at 9.30 A.M., and a prayer was offered by the Rev. Mr. Reeves: after which the minutes were read and approved.

Dr. Vanderpoel, chairman of the committee on the President's address, reported at length upon the suggestions made in the latter, and presented to the Society a number of resolutions—in substance as follows:—

1st. Advocating the construction of a State Hospital for Epileptics.

2d. Authorizing the appointment of a committee of three to secure legislation for this object.

3d. Recommending the appointment by the board of regents of the university of the State of New York, of a board of examiners for the purpose of determining the fitness of candidates for the degree of doctor in medicine, according to an Act passed in 1872.

4th. Making the board consist of nine members, of whom the President of the Society would be one,—*ex-officio*.

5th. Directing the Secretary to urge upon county societies the formation of committees on hygiene.

6th. Recommending the appointment of a committee of three to confer with the committees of other State societies, with a view to improving the organization of the American Medical Association.

7th. Directing that the medical colleges of the State be made acquainted with the views of the Society regarding the necessity for changes in their mode of instruction.

On motion of the Chairman of the business committee, the discussion of the paper was postponed to allow Dr. Robinson to read a paper entitled "Cases in Practice;" after which Dr. E. M. Moore called attention to the law above referred to, which was passed through the Legislature by the influence, it is claimed, of the homœopathic physicians of the State, and which will be found in another part of this Journal. Dr. Moore advocated the immediate nomination by the Society, of the board of examiners.

Dr. Eliot objected, on the ground that unless examination by such a board was to be made compulsory, and the examiners paid for their services, nothing whatever would be accomplished in the way of medical reform, by such a measure.

Dr. Moore said he had reason to believe that no difficulty would be experienced in finding gentlemen who would take the positions, since there is little prospect of their duties being more than nominal; and there were several reasons, which he explained, why it was desirable that the Society should comply at once with the provisions of the Act.

Dr. J. Marion Sims read the history of "A Case of Enucleation and Removal of an Uterine Fibroid Tumor," and exhibited the tumor and a trowel-shaped instrument which had been used in the operation. The tumor had been attached to the fundus, anterior and posterior surfaces of the uterine cavity, the greatest space being in front. It was removed without difficulty after dilatation of the cervix had been accomplished, and was followed by recovery on the part of the patient.

Dr. William C. Wey read a paper entitled, "Some Observations concerning the Hypodermic Injection of Ergot in Uterine Fibroids," in which he confirmed the statements of Hildebrandt regarding the remarkable results following the use of this remedy. He had, however, so little success with ergotine; the nauseating effects resulting from the prolonged use of ergot when taken into the stomach, had been so constant; its injection hypodermically had caused so much local irritation, that he had, with the assistance of Dr. Squibb, tried the introduction of suppositories containing a concentrated extract of ergot, and from this mode of its employment had derived the most favorable results.

Dr. Sims, who had been in pretty constant communication with Drs. Wey and Squibb about the case, confirmed the statements of the former regarding the value of ergot when used in the manner last mentioned.

Dr. Squibb made some lengthy and very interesting remarks regarding the nature of the remedy and the mode of its preparation; saying, among other things, that ergotine was a very variable substance, and by no means represented the active principles of the drug; containing more or less of them, according to the method employed for its extraction, and being un-

worthy of attention from those who wish to produce the effects of ergot itself.

The value of the extract depends entirely upon the care taken in selecting the drug, and Dr. Squibb had found by experience that the simplest mode of making it was the best; and after going through all the complicated processes, is now satisfied that evaporation of the watery extract on dinner-plates, stirring it carefully, and limiting the temperature to which it can be exposed, is the best way to obtain the concentrated extract, mentioned by Drs. Wey and Sims. At one time he thought the addition of glycerine necessary, but has found that the extract possesses hygrometric properties and does not, as he anticipated, become, with keeping, too dry for use.

Dr. J. N. Northrop, of Albany, presented to the Society, a child who had a congenital loss of the right arm, from below the middle. The father of the child had received a gun-shot injury of the right arm, and the scars were apparent just above a point corresponding to the extremity of the child's stump. During the time the mother of the child was carrying him *in utero* the father suffered from neuralgic pains in the arm, and the mother was in the habit of rubbing the arm and shoulder to give him relief. Dr. Northrop attributed the malformation of the child to "maternal impression," and called the case one of congenital amputation.

Dr. A. Jacobi said that this differed from what was known as congenital amputation, inasmuch as the latter has been supposed to depend upon the presence of constricting bands, which cut off circulation from a member, and so lead to its death. The present case was one of arrest of development; in proof of which Dr. Jacobi referred to the presence of little prominences at the extremity of the stump, resembling the "sixth finger," which every surgeon has had occasion to cut off. These little growths he believed to be of this nature, and to represent the fingers of a hand and fore-arm which had never been developed.

The following papers were read by title. "Penetrating Gun-shot wounds of Cranium, with Recovery," by Dr. A. Vanderveer.

"Sequelæ of a Case of Purpura Hemorrhagica," by Dr. H. S. Crandall.

Dr. C. Devoe presented two pathological specimens, and, owing to the limited time, made no remarks.

Dr. A. N. Bell offered the following resolution, which was added to the report of the committee on the President's address, and the whole accepted and adopted:—

Resolved, That the standing Committee on Hygiene be added to, and hereafter be recognized among the standing committees, under § 3, p. 20, of the Organization and By-laws of the Society, and that said committee place itself in immediate correspondence with the county societies.

Resolved, That the Committee on Hygiene consist of seven members, one of whom shall be Dr. C. R. Agnew; the balance of the committee to be appointed by the Chair.

The President then appointed the committee, as follows:—Drs. A. N. Bell, S. O. Vanderpoel, H. D. Didama, W. H. Dean, John Ordronaux, Stephen Smith, and C. R. Agnew.

The Nominating Committee then reported through J. Foster Jenkins, their Secretary, as follows:—The Committee on Nominations have the honor to report that they have unanimously agreed to recommend to the Society the following nominations to office for the ensuing year:—

President—Dr. E. M. Moore, of Rochester.
Vice-President—Dr. Francis Burdick, of Johnstown.
Secretary—Dr. William H. Bailey, of Albany.
Treasurer—Dr. Charles H. Porter, of Albany.

CENSORS.

Southern District—Drs. E. R. Squibb, of Brooklyn; E. H. Parker, of Poughkeepsie; Ellsworth Eliot, of New York.

Eastern District—Drs. J. P. Sharer, of Herkimer; Jas. L. Babcock, of Albany; George H. Hubbard, of Lansingburg.

Middle District—Drs. M. M. Bagg, of Utica; Horace Lathrop, of Cooperstown; C. G. Bacon, of Fulton.

Western District—Drs. Caleb Green, of Homer; C. C. Wyckoff, of Buffalo; D. Colvin, of Clyde.

COMMITTEE ON CORRESPONDENCE.

1*st District*—Dr. George F. Shrady, of Barrytown.
2*d District*—Dr. Abraham Crispell, of Rondout.
3*d District*—Dr. Henry B. Whitton, of Troy.
4*th District*—Dr. T. B. Reynolds, of Saratoga.
5*th District*—Dr. Samuel G. Wolcott, of Utica.
6*th District*—Dr. J. G. Orton, of Binghamton, (Chairman.)
7*th District*—Dr. Harvey Wilbur, of Syracuse.
8*th District*—Dr. Thos. F. Rochester, of Buffalo.

AS PERMANENT MEMBERS.

1*st District*—Drs. Robert Newman, of New York; J. Marion Sims, of New York.
2*d District*—Drs. T. Blanch Smith, of Rockland; Wm. H. Helm, of Westchester.
3*d District*—Drs. E. R. Hun, of Albany; R. H. Worrel, of Rensselaer.
4*th District*—Drs. John Parr, of Montgomery; D. G. Dodge, of Clinton.
5*th District*—Drs. H. G. P. Spencer, of Jefferson; Wm. L. Baldwin, of Oneida.
6*th District*—Drs. J. S. Dolson, of Steuben; William Fitch, of Tompkins.
7*th District*—Drs. Geo. W. Earle, of Onondaga; E. W. Simmons, of Ontario.
8*th District*—Drs. C. N. Palmer, of Niagara; J. R. Choate, of Genesee.

AS ELIGIBLE FOR PERMANENT MEMBERSHIP.

1*st District*—Drs. Ernst Krackowizer, A. Jacobi, H. Knapp, B. S. Thompson, and S. Caro, of New York.
2*d District*—Drs. Augustus Kühn, of Ulster, and Sol. Van Etten, of Oswego.
3*d District*—Drs. Albert Vanderveer, Henry March, and Charles A. Robertson, of Albany, and A. M. Vedder, of Schenectady.
4*th District*—Drs. Norman L. Snow, of Montgomery; Eugene Beach, of Fulton; E. D. Ferguson, of Essex; and A. C. Butcher, of Clinton.
5*th District*—Drs. Frank D. Beebe, and Lucius Stevens, of Oswego; F. B. A. Lewis, of Jefferson; F. B. Hough, of ———; Wm. H. Nelson and Judson B. Andrews, of Oneida.
6*th. District*—Drs. George Douglas, of Chenango; W. B. Alley, of Livingston; A. H. Cruttenden, of Steuben; J. K. Stanchfield, of Chemung, and G. W. Metcalf, of Tioga.
7*th District*—Drs. J. W. Palmer, of Ontario; T. B. S. Brinkerhoff, of Cayuga, and Wm. Oliver, of Yates.
8*th District*—Drs. Wm. B. Sprague, of Genesee; Wm. S. Ely, of Monroe; Wm. Gould, of Erie, and B. L. Hovey.

AS HONORARY MEMBERS.

Prof. Robert Stokes, Dublin; Prof. Rawdon McNamara, Dublin; J. M. Toner, Washington, D. C.; H. C. Lombard, Geneva, Switzerland.

AS ELIGIBLE TO HONORARY MEMBERSHIP.

Ernest Hart, London; Benj. W. Richardson, London; Spencer Wells, London; S. C. Bussey, Washington, D. C.; E. H. Gregory, St. Louis, Mo.; Washington L. Atlee, Philadelphia, Pa.; C. E. Brown-Séquard, New York; Ezra M. Hunt, Metuchen, N. J.; J. Mathews Duncan, Edinburgh.

FOR HONORARY DEGREE OF DOCTOR OF MEDICINE.

Matthew R. Teft, Onondaga Hill, Onondaga Co.

DELEGATES

AMERICAN MEDICAL ASSOCIATION.

Drs. Frederick Hyde, H. W. Deane, C. B. Coventry, C. R. Agnew, E. M. Moore, T. F. Rochester, Ernst Krackowizer, G. J. Fisher, A. Jacobi, P. Stewart, H. N. Eastman, B. F. Sherman, T. A. Emmet, Robt. Newman, S. O. Vanderpool, John P. Gray, D. P. Bissell, H. D. Didama, J. V. P. Quackenbush, E. R. Squibb, Francis Burdick, W. H. Bailey, C. C. Wyckoff, Alex. Hutchins, W. D. Strong, J. W. Wilkie, Wm. M. Chamberlain, J. R. Leaming and B. D. Hovey.

PENNSYLVANIA.

Drs. Jas. B. Murdock, S. Caro, J. B. Graves, S. H. French and C. E. Rider.

OHIO.

Drs. C. C. G. Gray and W. W. Townsend.

RHODE ISLAND.

Drs. B. S. Thompson and Samuel Hart.

NEW JERSEY.

Drs. E. R. Hun, M. H. Burton, R. L. Allen and Morgan Snyder.

NEW HAMPSHIRE.

Drs. R. H. Ward, James Anderson, Geo. H. Purdy, and M. R. Colvy.

VERMONT.

Drs. W. W. Porter, J. V. Cobb, P. Failing, Thompson Burton, F. C. Butler and H. C. Husted.

KENTUCKY.

Dr. Rexford Davidson.

KANSAS.

Dr. Hiram McNutt.

MAINE.

Drs. E. R. Peaslee, Wm. Govan, D. B. St. John Roosa and John Swinburne.

ILLINOIS.

Drs. J. H. Armsby and G. S. Winston.

MASSACHUSETTS.

Drs. E. Harris, John C. Peters, J. V. P. Quackenbush, J. V. Kendall, Gurdon Buck and Geo. F. Shrady.

CONNECTICUT.

Drs. J. C. Hutchinson, C. M. Palmer, H. C. Hendrick, A. E. M. Purdy, Ferris Jacobs, W. T. Douglas and S. G. Wolcott.

CANADIAN MEDICAL SOCIETY.

Dr. A. S. Wolf.

COMMITTEE ON STATISTICS.

First Dist.: H. P. Farnham, New York. *Second Dist.*: G. J. Fisher, Sing Sing. *Third Dist.*: Chas. H. Porter, Albany. *Fourth Dist.*: Alex. M. Vedder, Schenectady. *Fifth Dist.*: A. S. Odell, Brookfield, Madison Co. *Sixth Dist.*: J. G. Orton, Binghamton. *Seventh Dist.*: Nelson Niverson, Hector, Schuyler Co. *Eighth Dist.*: S. B. Coates, Batavia.

COMMITTEE ON PRIZE ESSAYS.

Drs. Thomas S. Rochester, Buffalo; Henry Dean, Rochester; Sanford Eastman, Buffalo.

COMMITTEE ON PUBLICATION.

Drs. H. B. Wheton, J. V. P. Quackenbush, W. H. Bailey.

COMMITTEE ON BY-LAWS.

Drs. Oliver White, New York; Thomas Hun, Albany; W. H. Bailey, Albany.

CENSOR FOR SYRACUSE UNIVERSITY, MED. DEP.

Dr. Sam'l G. Wolcott.

COMMITTEE ON PHARMACOLOGY.

Drs. E. R. Squibb, Caleb Green, Wm. Manlius Smith and B. A. Segur.

On motion of Dr. Eliot, the Vice-President was empowered to cast the ballot for the Society, and Drs. Moore, Burdick, Bailey, and Porter being respectively declared elected, the report of the Committee was accepted as a whole, and the officers named by them declared unanimously elected.

DR. JENKINS offered a resolution, as a part of the report of the committee, that no one should be eligible for election to permanent membership until he had been a delegate for three years.

DR. SQUIBB offered an amendment, which required delegates to be present and serve at the meetings of the Society for three years (not necessarily consecutive).

After discussion, the resolution was carried as amended, and the report of the committee adopted.

DR. F. B. A. LEWIS offered the following:

Resolved, That this Society extend their sincere thanks to the officers and members of the Medical Society of the County of Albany, for their munificent entertainment and warm reception of last evening. Carried.

The PRESIDENT addressing the Society, then said:

I cannot leave the chair in which I have been placed by your favor, without thanking you for the great indulgence and charity which you have manifested towards me, as your chairman, nor without wishing you, personally and collectively, all the happiness that you desire in your individual relations, and in your professional associations. I thank you for your great kindness. [Applause.]

On motion of Dr. Ellsworth Eliot, the Society adjourned, *sine die*.

Progress of Medical Science.

SULPHATE OF CINCHONA.—M. Briquet, at a recent meeting of the Paris Academy of Medicine, gave his conclusions with regard to the value of this drug, as based upon 893 authenticated cases which had been treated successfully with it, since the time of Magendie and Chomel.

Its success had been especially marked in cases of intermittent fever of medium intensity. Furthermore, it arrests the paroxysms of typhoid, mitigates the symptoms of intermittent neuralgia, and is of great benefit in articular rheumatism. Dr. Briquet lays great stress upon the mode of administering the drug. It should be given in watery solution in doses of from fifty *centigrammes* to one *gramme* (eight to fifteen grains), according to the intensity of the fever. The whole dose must not be given at once, but must be divided over five or six hours, and it is extremely important that the substance should be taken during the apyretic interval, and at least eight or ten hours before the return of the fit.

The Art of Tinting Opacities of the Cornea.—At the last meeting of the British Medical Association, Dr. C. B. Taylor, of Nottingham, spoke of a method by which this deformity might in some cases be lessened. By means of fine needles, or an instrument made for the purpose, the diseased cornea may be tattooed with India ink, and various other substances, so as to be distinguished from the neighboring black pupil. Not only is the deformity thus removed, but, it is said, the sight is somewhat improved, which is somewhat difficult of comprehension. The method is almost painless, free from danger, and easy of execution. When nearly the whole of the cornea is opaque, it is easy to restore the natural appearance by tattooing a central black pupil; and, after iridectomy, extraction of cataract, &c., the dazzling, if excessive, may be limited by tinting a portion of the cornea so as to constitute a permanent shade. It is not necessary to confine the patients or close the eye. Where a solution of lamp-black and nitrate of silver is employed, one sitting suffices. The opacities should be tattooed obliquely, beginning from below.

Treatment of Phagedenic Chancre by Irrigation.—In the treatment of phagedenic chancres, Mr. Hutchinson, of the London Hospital, has for some time, with very good success, used the continuous bath. The patient is ordered to sit in a hip-bath with tepid water for the greater part of the twenty-four hours, a few hours being allowed for sleep. The water is changed as often as it becomes uncomfortably cool. This treatment is kept up until all phagedenic action ceases, and the sore shows a perfectly healthy surface. It may or may not be necessary to apply nitric acid to the sore in addition to the bath, but the cleansing effect is, in some cases, all that is required.

Mr. Hutchinson attaches great importance to a frequent change of the water in contact with the sore, and lately he has directed the patient to keep a continuous stream of water from an irrigating apparatus playing on the ulcerated surface, while in the hip-bath. By this means every particle of contagious phagedemic discharge is removed as soon as secreted, and the formation of a healthy surface is much accelerated.—*Boston Medical Journal.*

The Resuscitation of Animation in Newly-Born Children.—Dr. John Gregory, of Manchester, England, calls attention to two opposite conditions which he has found to exist in cases of suspended animation in the newly-born. In the first class the head appears to suffer from a redundancy of blood; and is most common when the head is born some time before the remainder of the body, and the pressure upon the portion remaining in the uterus and the vagina causes an accumulation of blood to take place in the head. This variety is generally relieved by allowing a small quantity of blood to flow from the navel. The second variety is less commonly noticed, and is that in which the reverse takes place. In a breech presentation the head, being born last, is subjected to pressure which empties its vessels and produces anæmia of the nerve-centres of the brain and medulla. Such cases are quickly relieved by placing the child's head downwards, by which posture the return of the blood to the cranium is encouraged. It is his practice in the latter class of cases to allow the infant to hang head downward for about a minute at a time, and employ also friction of the back and nucha. In both varieties the postponement of respiratory movements is attributed by him to disturbance of the circulation in the medulla.—*The Doctor.*

Psoriasis and Eczema.—In the *Annales de Dermatologie et de Siphilographie* there is an interesting article on the treatment of the dartrous diathesis. The two incarnations of dartre are psoriasis and eczema. Psoriasis is a primitive lesion of the epithelial tegumentary tissue, with a secondary, and a slight effect on the connective tissue. The glandular, vascular, and nervous apparatus escape almost completely from this lesion. Impetigo, lichen, psoriasis, both *alba* and *rubra*, are nothing more than varieties of eczema. Eczema is a dermatitis, most frequently serous; it is a primitive lesion of the connective tissue, with a secondary effect on the epithelial. The vessels are attacked in eczema, hence its diffusive character; psoriasis very rarely touches them, hence its limitation. Eczema also attacks the glands. Therefore the perspiration is diminished, and a reaction on the entire organism is possible. Psoriasis can be cured by the administration of sulphur or arsenic, because these stimulate the epithelial region, from which they are thrown out of the system. But these remedies have little or no effect on eczema, because they do not affect the connective tissue. Nothing but palliatives has been discovered up to the present for the latter malady.—*Ibid.*

Cerebria.—Charles Elam, M.D., London, in a work on "Cerebria and other Diseases of the Brain," gives an account of a disease which he has denominated Cerebria, being a spontaneous, acute, general inflammation of the substance of the brain, unaccompanied with meningitis. It is a disease which *may perhaps* occur at any period of life, although he has never seen it before eight, nor after thirty-six years of age. It is certainly much more frequent between ten and thirty than at any other ages, and is uniform in its commencement and its termination. It begins with vomiting, and ends with death. The intermediate phenomena are not very striking, and the duration is from thirty-six hours to twelve days. It differs from the forms of encephalitis hitherto described in its causation, mode of invasion, progress, and its morbid anatomy. Cases are related illustrating the natural history, etc., of this disease.

Congenital Cyst of the Neck.—In reading a thesis of M. Paul Boucher, entitled "*Etude sur les Kystes Congénitaux du Cou*," Dr. W. C. B. Fifield, of Dorchester, Mass. (*Boston Med. and Surg. Jour.*, Nov. 7, 1872), states that his recollection reverted to a case of congenital cyst of the neck occurring in his own practice, an account of which was published in 1860. The case presented some points that invalidate M. Boucher's plan of diagnosis, and was unique in the extension of the cyst to the axilla. The opinions of both Dr. Fifield and Boucher are, that any operation is unadvisable, both for simple and composite cysts. The former case conflicted with the diagnosis of M. Boucher in several particulars. 1st. Simple congenital cysts may

appear in the posterior region of the neck. 2d. They may exceed the boundaries given by M. Boucher, and appear in the axilla. 3d. Contrary to the proposition of M. Boucher and Herr Wernher, a posterior cyst may be found in a child born at term and presenting no deformity of body. Lastly, the result shows the good effects of an expectant mode of treatment.

Fibroid Tumors of the Uterus.—Alfred Meadows, M. D., London, England (*Am. Jour. Obstetrics*), in his "Remarks on the Diagnosis and Surgical Treatment of Fibroid Tumors of the Uterus," says that, having determined the situation of the tumor and its interstitial character, one is justified in attempting the removal of these tumors even though they be not intra-uterine or submucous, but are situated in the substance of the uterus itself, provided a proper canal be inaugurated. His plan is, first of all, to prepare the passages for the expulsion of the growth, and, secondly, to detach the tumor from as much of its surroundings as possible, so that, by making of it a foreign body, nature may aid in its removal, as she would in the case of a dead fœtus or a mole-pregnancy, or even a uterine polypus. Lastly, when nature has been given fair play, the écraseur should come to the rescue, and remove at once what might otherwise be the work of many months or years. He had recently under his care a case in which the tumor was completely embedded in the substance of the uterus, so much so that the os was not dilated in the very least, and he had the satisfaction, after three or four operations, of completely removing the tumor, which was of the size of a small cocoa-nut. The patient is now perfectly well.

At the date of writing he had two other cases of the same kind, but in both the tumor was much larger. He had commenced with the same plan of treatment in these cases, and he had every reason to believe that a cure would be effected.

The first step in the process is to prepare the passages for the removal of the tumor. For this purpose he recommends free division of the cervix uteri in one or more directions. The next step is breaking with the finger through the capsule, and little by little detaching the tumor from its bed. During the intervals efforts should be made, by the administration of ergot, borax, cinnamon, and other so-called oxytoxics, to secure contraction of the uterus, so as to favor nature's method of expulsion. Galvanism is also another agent of great power in this respect; and a firm bandage is of service in cases where the tumor is large and projects well into the abdominal cavity.

After-Treatment of Fibroid Tumors of the Uterus.—After the removal of these tumors, Dr. Alfred Meadows, of London, England (*Am. Jour. Obstetrics*, Aug., 1872), advocates the subjoined after-treatment: The first thing to do is to secure firm contraction of the uterus after it is emptied of its contents. This is necessary not only to prevent hemorrhage, but also to avert the occurrence of septicæmia. The latter object will be still further secured by frequent injections of warm solutions of permanganate of potash, carried well up into the uterine cavity. In reference to medicines, he knows of none which are either useful or desirable, except it be opium, and this he regards as of a greater value than any or all other medicines put together. He is also very partial to the employment of hot linseed and laudanized poultices to the abdomen in all cases of serious operations upon the uterus where there is a liability to pelvic or peritoneal inflammation.

The Brownian or Molecular Movement.—This movement, defined as a peculiar oscillatory motion, attended with little or no change of place, and common to all bodies sufficiently comminuted to admit it, is clearly demonstrated by James Tyson, M.D., of Philadelphia (*Dental Times*, Oct., 1872), by rubbing up with water any light substance like carmine, indigo, or gamboge, or any substance already finely comminuted, as the ashes from a grate, commingled thoroughly with water; a drop of this mixture is placed on a glass slide, covered with a thin glass cover, and examined. To one unaccustomed to working with the microscope, it is not at first easy to detect it, but a little examination will enable it to be seen, and, once discovered, it is readily detected in succeeding instances. It is also seen in all fluids of the animal body which contain finely comminuted particles, whatever their source. The little particles of fatty matter constituting the "molecular base" of chyle show it beautifully. The author has no doubt but that the oscillatory motion of the granules in the so-called salivary corpuscle, the pus, mucus, and white blood-corpuscle, are identical in nature, whatever the cause. But the oscillatory motion peculiar to the well-known organisms called vibrios, which appear so promptly in all animal and vegetable infusions, must not be mistaken for it, since the motion of the vibrio is attended with change of place, and molecular motion is not.

The exact cause of this peculiar motion is as imperfectly known now as when it was first noticed. That evaporation, once suggested as a cause, has nothing to do with it, is easily proved by cementing down the thin glass cover of a preparation in which it is taking place. Though heat accelerates it, it is by no means a cause of its existence; and the most that can be said with regard to it is, that it is due to some physical action rather than chemical, perhaps, taking place between the particles and the fluid in which it floats, and which is increased by heat.

Acute Traumatic Phlebitis.—J. L. Teed, M.D., Kansas City, Mo. (*Kansas City Med. Jour.*, Oct., 1872), reports the case of a young man, aged 17 years, with acute traumatic phlebitis following severe contusions, treated successfully by carbonate of ammonia in large doses. This patient took thirty grains of carbonate of ammonia every two hours, for sixty hours; then every four, for thirty-six hours; making in all nineteen drachms in ninety-six hours, together with three drachms of quinine. The dangerous symptoms were at once arrested, and befinally entirely recovered. The inflammation had passed up the deep veins, and was descending along the long saphenous vein.

Muscular Contraction a Cause of Fracture.—Geo. W. Norris, M.D., Clinical Surgical Recorder in the University Hospital, Baltimore, Md. (*Rich. & Louis. Med. Jour.*), relates a case of simple fracture of the middle third of the humerus in a mechanic, aged 32 years, caused by violent muscular contraction while throwing a brickbat.

Dr. E. S. Gaillard remarks that Prof. J. M. Holloway recently presented to the class in the Louisville Medical College a case of fracture of the clavicle, caused by throwing an ear of corn.

Ergotine as a Hemostatic.—C. H. Boardman, M.D., St. Paul, Minn. (*Northwestern Med. and Surg. Jour.*, Nov., 1872), speaks highly of ergotine, hypodermically given, in an obstinate case of placenta prævia, after all other remedies had failed. For a period of two weeks, the perils incident to this grave condition were averted, and the patient brought safely to within a fortnight of her full time.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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

Published on the 1st and 15th of each Month, by

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New York, February 15, 1873.

HOW SHALL WE REFORM THE AMERICAN MEDICAL ASSOCIATION?

A FEW months since we pointed out what appeared to us to be the reasons why the American Medical Association failed to represent American medical science, and we offered some suggestions to remedy the evil.

The object of our editorial has been, in part, already accomplished. The journals all over the country have been aroused to the discussion of the subject; our remarks, pungent and severe as they were, have been pronounced in the main just, true, and necessary, bringing words of encouragement from every direction.

While the journals differ in their plans for improving the Association, all agree that the Association as now carried on does not represent American science, and the best men in the profession everywhere seem to be anxious that something should be done to redeem ourselves before the world.

The radical and original proposition made by the *Boston Medical and Surgical Journal*—already published by us—does not meet our approval. Before we attempt to overthrow the present Association, let us make one careful, earnest, determined, and united effort to bring it up to the requirements of the nineteenth century.

We have been especially interested in the admirable series of papers written by Dr. N. S. Davis, of Chicago, and published by him editorially in the *Chicago Medical Examiner*. No other man knows the Association better than he; no other man can help on the work of reformation and rejuvenation so well as he. Although he modestly denies the soft impeachment, his influence at the meetings of the Association is paramount. He promises to do all in his power to correct the evils of which we complain, and we believe him to be sincere. He asks our co-operation, and he shall have it.

The suggestions we have to make may be comprised in the following propositions:—

I. Let the Committee on Ethics be chosen by the Nominating Committee, and be at least fifteen in number. So long as the Association retains its present constitution, the important business—the test questions—those which try the patience and wisdom of our profession, must first come before this committee. Let this committee carefully consider every ethical question before presenting it to the Association; let them make a majority and minority report, if necessary, so that the Association can see the true issue at stake, and, without the usual long discussion, decide one way or the other. If the committee be large and of such a character as to command the confidence of the profession, their unanimous decision will be entitled to respect, and will command it. As the committee now stands, no one respects it or believes in it. The reputation of Cæsar's wife is of little moment in comparison with the reputation of our profession—it should be far above the suspicion of carrying on important business through packed committees. Let the committee be composed of young and old men; let it represent all sections; let it include physicians and surgeons, and specialists as well as general practitioners. Whatever else we may do, reform must begin here. Will Dr. Davis have the kindness to present this matter at the next meeting of the Association?

II. Keep newspaper reporters out, and let the Association have its own reports printed daily, as Dr. Davis suggests, for the use of the members.

III. Let the papers that are read before the sections be recommended for publication in some journal, if they be worthy of such recommendation; and let the Transactions be confined to the minutes of the meetings and official reports in a condensed form for future reference.

To the suggestion made by the *Chicago Medical Examiner*, that the Association be radically changed in its character, and be composed of members who have passed an examination before examiners chosen in the different States, we have the objection that it is impracticable, and, we believe, unwise. Who shall choose the examiners? What standard will be required? Would not the selection of the examiners in the different States cost much wire-pulling and intriguing?

Nothing is harder than to make any examination a test of real worth among practising physicians. One may be a most admirable physician, surgeon, a good specialist, and a successful practitioner, and yet be unable to pass the examination of any of our leading medical colleges. Students who have recently passed, or are just passing their examination for a medical degree, would probably make the best appearance before an examining body, and the majority of practitioners of acknowledged character, skill, and culture, would, in fear, snub the whole thing.

We would modify the proposition of the *Examiner*,

by restricting the right of sending delegates; giving such privilege to medical societies alone. Delegateship is now too common an affair. Officers of colleges are also members of societies. Let them go to the Association as members of their respective societies. As it now stands, the delegateship often goes a begging. Let there be fewer delegates, and let it be an honor to be elected one.

PROGRESS IN QUARANTINE.

Medical science has not progressed more rapidly in any branch than that which includes the study of quarantinable diseases. Advancement in their study is, so to speak, going backward, from the intricate network which ages of superstition and interested policy have woven around the risks of contagion, and substituting instead such judicious precautions as the public safety may demand, and the progressive knowledge of the day may permit.

Venice, in the twelfth century, required a detention of forty days for protection from the dread disease of the Levant; and New York, in the nineteenth century, requires even a longer quarantine than this.

Under the present law all vessels suspected of exposure to quarantinable disease are required to remain at quarantine "for at least thirty days after arrival, and at least twenty days after discharge of cargo," "and perform such further quarantine as the Health Officer requires," unless he shall sooner release them. This requirement, not founded upon good sanitary reasons, and fatal to every business interest, has been a blot upon the statute books, and a standing disgrace to the medical profession.

The present Health Officer insists that in this particular, sanitary science and commercial interest may work in perfect harmony. That while the one demands the speedy discharge of an infected cargo, and the cleansing and purification of the vessel, it at the same time returns the vessel to active commerce in the shortest time.

The temptation of previous officers to avail themselves of this power, and exact, it may be, twenty-five per cent. of the profits of lighterage, towing, and stevedoring,—placed at one hundred per cent. above harbor rates, or the sum of forty thousand dollars as a gross amount,—brought about the bitter dissensions of the past, and culminated in the present course of administration.

The present incumbent, from the beginning of his term, has sought to develop the medical character of the position, and shown uncompromising hostility to the absurd restrictions which, from time immemorial, have been submitted to by his predecessors. The medical profession, for the first time in the history of those now living, have been invited to see the quarantine of New York, great in its interests, magnificent in its proportions, and growing more and more perfect in its facilities to meet the real wants of expanding commerce.

In the Annual Report, now before us, it is evident the sanitary bearings of quarantine are those he professes to develop and make perfect, while the business interests are left where they belong, to the commercial community.

So thorough and complete has this departure been made during the past season, that probably never again will the profession be disgraced by brawls and fights over "lighterage rates" and the "price of coopering;" and Dr. Vanderpoel has earned the thanks of his profession for this, now "*un fait accompli.*"

The new law, which has through Senator Adams been presented to the Legislature, embodies systematically these and other important alterations in the quarantine system. In this law each disease is subject to requirements suited to the special danger which pertains to it. No unnecessary burden is added to commerce, while no relaxation is permitted which might open the door to danger. It simplifies the working detail of quarantine; gives the Health Officer the power which he requires to perform his duty; and, keeping all that was valuable in the old, leaves out that found to be injurious.

THE EDUCATION OF NURSES.

The failures of the medical attendant come largely from bad nursing. Bad nursing is a two-edged sword, which may not only kill the patient, but injure the physician, the nurse alone being exempt. The patient not unfrequently requires a care that the friends cannot be made to comprehend, yet for want of it he often dies. The friends may hint darkly, but the doctor has no opportunity for defence. The latter may call upon a patient once, or in a critical case perhaps twice a day, but what may occur between these visits is too often a source of constant apprehension. To bridge this sometimes fatal gap, he is often compelled to remain by the bedside for hours at a sacrifice rarely appreciated.

If this is the case in the families of the rich, it is still worse in the families of the poor, where not only the skill, but the means of nursing are wanting. Attending physicians of dispensaries know too well how often from this cause their prescriptions are worse than a farce, being made the sole reliance for recovery.

Neither for the rich nor for the poor, in any emergency, is a properly certified skilful nurse to be obtained in this city. We do not say there are no professed or professional nurses, nor that none of these are properly qualified; but that as none have official evidence of it, their competence, in any new case, is a question of experiment.

Not only in private, but in hospital practice also, the advantage of skilful nursing is no less apparent, the demand no less urgent.

The difficulties and evils of the present system in some of our hospitals are too well known to need mention. The duties of a hospital nurse are looked upon as low and obnoxious to the last degree,—and correctly so. To a low person, what employment could be lower or more repulsive? When we know this work is done for hire by those who take such views of it, the manner in which it is done needs neither explanation nor apology. This fact is too apparent, when we consider that much of this nursing, in some of our charitable institutions, is being done by men and women of the lowest type of abandonment, the effect of which, both upon nurse and patient, is obviously little else than one of mutual degradation.

In every hospital, at least, there is a necessity for nurses, who in their department have credentials as high and as authentic as those of the physician in his. This need is manifest and pressing; but at present there is no resource nor remedy.

How may the demand for skilled nurses be supplied? The facts above referred to are not a recent discovery. In other parts of the world the same difficulties have been experienced, and attempts have been in some places made to meet them. The most feasible course of which we know is that which has now for some time been in operation in London, and with such success as to have induced similar efforts in Liverpool and elsewhere.

We are happy to announce, in this connection, the determination of the "Local Visiting Committee of Bellevue Hospital" to establish a similar training school for nurses in New York. Already they have made an appeal to the public for the necessary funds. The project is in thoroughly competent and responsible hands, and has our hearty wishes for its ultimate success.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Our space does not permit us to say much regarding the sixty-seventh anniversary meeting of the State Society, a full report of which we give with this number. We will make a more extended review of the proceedings at another time, and will now only remark the large number of papers of real value which were presented; the unusual attendance, and the interesting nature of the educational, sanitary, ethical, and other questions submitted to the Society.

Few men could have given as much satisfaction as did Professor Agnew, by the manner in which the proceedings were conducted: and the election of Professor E. M. Moore, of Rochester, to be his successor, is a guarantee that the interests of the Society will not suffer from want of as able management during the year to come.

A Substitute for Quinia.—Carbazotate of ammonia is given, with successful results, in France, in place of quinine. It is given in 2 *ctgr.* doses, in the form of a pill.

Reviews and Notices of Books.

New Treatment of Venereal Diseases and of Ulcerative Syphilitic Affections by Iodoform. Translated from the French of Dr. A. A. Izard by Howard F. Damon, M.D. Boston: James Campbell. 1872.

The treatment of venereal diseases and of ulcerative syphilitic affections by iodoform is discussed by Dr. Izard with much earnestness. He advocates for the remedy what cannot be claimed for any other article in the Pharmacopœia, viz.: that it is a specific in the treatment of venereal ulcers, whether local or constitutional. His cases are well recorded and bear the stamp of truth; but the uniform success attributed to iodoform has not been attested by the experience of others. Perhaps, however, the mode of application has not been as thorough as that pursued by Dr. Izard, and hence the unfavorable reports.

The translator has performed his difficult task with remarkable ability; the rendition of the many almost untranslatable idioms into correct, and, we may say, elegant language, giving evidence of his scholarly attainments.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 19th, 1872.

Dr. Wm. C. Roberts, Vice-President, in the Chair.

Dr. Stephen Smith read a paper entitled

ERRORS IN THE DIAGNOSIS AND TREATMENT OF SURGICAL ANEURISMS.

The object of the paper was to point out the difficulties which the surgeon encounters in the diagnosis of complicated forms of aneurism, and to establish the limits of responsibility for errors which occur. These errors were divided into *unavoidable*, and *avoidable*: the former being due to the inherent difficulties in each individual case, and the latter resulting from the surgeon's own want of knowledge, or from his unskilfulness. The sources of difficulty in the diagnosis of aneurism were then pointed out, and the diseases which they may simulate were examined in great detail, with illustrative cases.

The affections for which aneurisms are liable to be, and have been, mistaken, by eminent surgeons, are: abscesses, tumors of various kinds, bronchocele, enlarged bursæ, rheumatic enlargement of the joints, malignant diseases, pulsatile tumors of bone, etc.

In each instance the *unavoidable* and *avoidable* errors were carefully discriminated, with a large number of examples illustrating each variety.

Dr. R. J. O'Sullivan, in responding to the request of the Vice-President, said that he would contribute his mite to the discussion of the subject. He confined his remarks to the relation of three cases which, he thought, would corroborate the views of the author of the paper as to the diagnostic difficulties referred to.

The *first* case was one that was observed by him whilst visiting one of the hospitals of this city, as he was in the habit of doing during the first years of his practice. The visiting physician called his attention to a patient who had just been admitted to the medical wards. The patient had a small tumor in the popliteal

space, which, though in a suspicious place, presented few of the diagnostic symptoms of aneurism. On balancing a pencil on the tumor, he detected pulsation distinctly; from these and other circumstances he inclined to the belief that it was an aneurism, which opinion was concurred in by the attending physician, and some other medical gentlemen who were present. The patient was transferred to the surgical division. A few days afterwards, in passing into the ward, he noticed the patient minus his leg, and on further inquiry he learned that a consultation had been held and it was decided that the tumor was an abscess. It was accordingly opened, and the fact demonstrated that it was an aneurism. Amputation immediately followed.

The *second* case that he mentioned was one calculated to demonstrate the difficulties in the differential diagnosis between aneurism and abscess. A few years ago, an Englishman came to his clinic at the Eastern Dispensary with a pulsating tumor situated above the sternum, which seemed more like an aneurism than anything else. It was so decided by several prominent medical men of the city. After attending for some time he suddenly disappeared, and he did not again see him for several months. The patient then asked if he remembered him, saying that he was the patient who had the "Haneurism of the Heart," and produced a paper—covering several pages of foolscap—giving the history of his case, and detailing the diagnosis and remarks of the medical gentlemen who had examined him. In brief, he was admitted to one of the city hospitals, where the tumor was diagnosticated an aneurism; and his family were informed that they might soon expect his death, as he would certainly die when the tumor ruptured. When that took place the existence of an abscess was made evident, and the patient lived to tell his own story.

The *third* and last case mentioned was that of a Chinaman with a large pulsating abdominal tumor, which had all the appearances of an aneurism. Two or three distinguished surgeons were called; one failed to make a diagnosis of any kind; another said that the tumor was attached to the left lobe of the liver; finally, the late Dr. Valentine Mott saw him and examined him very carefully, and pronounced the tumor to be an aneurism, adding that it was not as well defined as some that he had seen. On the death of the patient the autopsy revealed a carcinomatous tumor lying on the abdominal aorta.

The speaker concluded his remarks by saying that this region was as yet but an imperfectly explored territory, and hoped that some American genius, perhaps a member of the Academy, would yet discover some instrument which would enlighten the profession, and do for this region what auscultation has done in treating disease on the other side of the diaphragm.

Dr. A. L. Loomis alluded to the use of the thermometer in diagnosticating tumors—which was not mentioned by Dr. Smith. In no case of aneurism which he had tested by the thermometer was there a temperature of over 100°. He believed that this instrument was one of the most valuable means of diagnosis.

Dr. J. C. Peters supposed that Dr. Smith would have included all varieties of aneurism with his surgical cases, and recalled some of the cases which were recorded in the Proceedings of the New York Pathological Society. There were three cases of aneurism of the basilar artery; nine of the coronary artery; eleven of the walls of the heart; and thirty-three cases situated just above the aortic valves, and perforating into the pericardium, causing instant death. One of the earliest cases was described by Dr. Markoe in 1842. In three or four cases there was rupture of the internal coat. Some were as high up as the arch of the aorta, dissecting down to the pericardium, into which they finallyruptured; then death was slow instead of instantaneous.

Dr. J. R. Van Kleek said that he had a patient with rupture of the aorta into the pericardium, who lived twenty-two hours. He also spoke of a case of embolism of the pulmonary artery, in which the patient died in ten minutes. In response to Dr. Loomis, he said no examination of the brain was made.

The Academy then adjourned.

Twenty-Fifth Anniversary Meeting, Dec. 30, '72.

Dr. Edmund R. Peaslee, President, in the Chair.

Dr. Edward S. Dunster delivered the annual discourse, of which we give an abstract, regretting the want of space for its publication in full.

After alluding in the introductory to the years which have rounded a cardinal division of the first century of the life of the Academy,—years which have been characterized, on the one hand, by marvellous advances in the arts and sciences, and on the other by a freedom of thought so active, so bold, so iconoclastic, as to have brought constantly upon this day and generation the charges of infidelity, scepticism, and even graver forms of unbelief,—the speaker said that this active, bold, iconoclastic thought, much of it undoubtedly speculative, but more of it based on a rigid and logical induction of observed phenomena, has pervaded almost every department of knowledge; it has changed entirely the aspect of many of the physical and organic sciences; has shaken systems and theories which were considered immovable; has unhinged beliefs which were accepted as conclusive, and caused a distrust of others that were assumed to be equally secure; has wrought the direst confusion among the theological and metaphysical conceptions of the order and evolution of the universe, and the estimate of man's place in nature; has reached even to religious beliefs, and already has shorn them of much of their harshness, their terrors, their uncharitable intolerance; in short, has brought about so many antagonistic opinions, and has unloosed so much distrust and suspicion regarding everything that finite intelligence can lay hold of, that we may, with propriety, ask ourselves whether the charges to which allusion has been made are not well founded.

Is the medicine of to-day based upon any solid foundation? Is its future assured, or is it now, and must it always be, a shallow empiricism, dependent for its form upon caprice and fashion, and relying for its support upon credulity and ignorance? It seemed to him that a little reflection would show that the medicine of to-day is a logical outcome from its past history, its failures and successes, its incongruous mixture of truth and error, and that, measured by the same standard, its future progress, though indeterminate as to rate, is assured beyond all doubt,—in other words, there is a logic in medicine which governs its evolution and measures its progress.

By the term "logic" is here understood, not the *pure* logic of the schools, which is concerned only with the laws of the form of thought, but *applied* logic, which has reference to the matter, or facts, or truths of the objects and phenomena to which thought is directed. In this sense, then, the logic of medicine acquaints us with the processes by which the mind arrives at that appreciation of the facts and phenomena with which the physician has to deal, which constitutes empirical or experimental truth. Its office, therefore, is not to disclose truth, or fact, or doctrine in medicine, but to

acquaint us with the real value of the ways and means by which such disclosures are attained; to enable us to judge whether our investigation has been conducted by proper methods; to warn us of error or fallacy, and to furnish us with data whereby to test the correctness of our conclusions. It is a logic which is equally applicable to all the so-called experimental sciences, and which, in many of them, by reason of the greater simplicity of the conditions under which phenomena are observed, has resulted in such a comprehensive and precise acquaintance with the laws which govern those phenomena.

The inductive method, first distinctly formulated by Bacon, and one of the means of arriving at the truth in the physical sciences, was dismissed by the speaker with a full acknowledgment of the valuable services it has rendered.

Inasmuch as the knowledge gained by observation and experiment is inadequate to the final result, he remarked that we make another advance in the step of comparison. Logic brings in as auxiliaries here classifications, analogies, and statistics, and shows their true value and uses, the extent to which they may be carried, and the validity of the deductions that may be made from them. It further guards against inaccuracy by declaring that the facts compared must be of the same kind, as nearly identical as may be possible in the nature of things; by showing that they must be brought together in sufficient numbers to enable us to correct errors of individual observation, to determine what has uniformly occurred either as antecedent or resultant, to distinguish between constant and accidental sequences and coincidences, and to pick out by exclusion the efficient cause or causes, where, as is continually the case in so complex a structure as the human body, many are acting at the same time.

Logic forbids all ambiguity in the terminology, definitions, and descriptions employed in medicine, and demands that such technical language must represent actualities, and must not include any misstatement of fact; must be devoid of surmise, and must not be a cover for our own ignorance. The medical nomenclature, even of to-day, is in open disregard of this rule of logic, and it is no easy matter to correct it. It has come down as a legacy from former generations, when the terms were devised in accordance with the best information then extant; and although subsequent knowledge has shown the incorrectness of very many of such terms, they have become so incorporated into our modes of speech that we cannot now escape them. The mischief accruing, therefore, is almost incalculable, as it is well-nigh impossible to secure anything like precision of thought or an accurate habit of expression by the employment of a terminology that is notoriously ambiguous, incorrect, and unsatisfactory. Centuries have been required in the formation of our technical language, and it will require centuries more to remove the disabilities that have thus been imposed upon us. But logic shows us the way out of the difficulty, and imperiously demands that we avoid it in any additions that may hereafter be made in our medical nomenclature.

With the dawn of Protestantism, in the beginning of the 16th century, there was ushered in a spirit of free inquiry which soon brought about a more healthy state of opinion, and which, coupled with the diffusion of knowledge, has at last made it well-nigh impossible for men to stand spell-bound at the assertions of authority. And so to-day, in a far more logical and philosophical spirit, when a Cohnheim, following up the track of Waller's original observations, asserts the passage of the white corpuscles bodily through the walls of the minute blood-vessels, we neither affirm nor deny the apparent paradox, but, with the true spirit of the logic of medicine, hundreds of microscopes are at once brought to bear on inflamed tissue, to test the truth or falsity of the assertion; while the theory which is based on the fact is held in abeyance until further experiment and comparison shall have fulfilled all the requirements of logic before accepting the theory as established truth. And so, again, when Liebreich, by a process of purely logical deduction, suggests that an article hitherto known only as a chemical curiosity may become a serviceable medicinal agent, and boldly puts it to the test of administration, we applaud his scientific spirit of inquiry; but still reserving to ourselves the logical right of search, thousands of human stomachs, the world over, are at once impressed into service, and straightway there is added to the materia medica a remedy of great potency and of unquestioned value.

Passing by the absurd and crude notions which attributed disease to supernatural causes, the anger of the gods, the malign influence of the stars, etc., we can trace in almost every prominent theory the idea that disease is something added to the body, and which is accordingly to be removed. Thus, at one time it is an excess in some of the humors of the body; at another, morbid or chemical or mechanical forces overcoming or acting in opposition to the healthy forces of the body. Again, it is an effort of nature to expel some noxious material, and now it is a morbid deposit, which by its presence sets up some disturbance of the system. Happily these ontological conceptions of the nature of disease are passing away, and the whole tendency of modern medicine is to take essentially the opposite view,—that disease, under all its manifestations, is only a perverted healthy process; something less as it were than life, and out of this comes the prevailing system of therapeutics known as the restorative method. It implies, first, a scientific recognition and examination of healthy phenomena (physiology); and next, an equally rigid inquiry into unhealthy phenomena (pathology); and finally, in determining the therapeutical indications, it does away with much of that vain search after specifics which has so hindered the progress of medicine.

This diminishing belief in specifics is more apparent as we come down from the limited professional knowledge of the past to the greater of our own time, and everywhere it may be said to be in proportion to the ignorance of the people; and accordingly, with the best informed physicians of to-day, the question is not what drugs shall be prescribed, but shall there be any treatment beyond rest and an appropriate regimen; and if his knowledge tells him that these last are sufficient for the case in hand, the physician courageously withholds all medication; and now, when some ill-informed person flings back that ugly word scepticism to indicate his estimate of what, with a show of learning, he will probably style, in the well-worn phrase of Asclepiades, "a meditation upon death," the reply is ready,—that a knowledge which can dictate such a management of a case has in it not a single element of doubt, and is, therefore, as far as possible removed from scepticism. It is vastly more positive and more serviceable than mere faith in the efficacy of drugs without knowledge, "which, in medicine," says Sir William Jenner, "is the worst form of scepticism, inasmuch as it is doubt of truth and belief in error—doubt which may prevent the saving of life, and belief which, embodied in practice, may kill."

By reason of increased knowledge we can more cor-

rectly than heretofore theorize regarding the nature and origin of many diseases, and this may be done with propriety; for logic, as has already been seen, does not exclude theory. In support of this position, let us briefly refer to some of the more noticeable advances of recent years; and in so doing it will be seen that the assertion which has been so frequently, yet carelessly made, that, while the science of medicine has been steadily progressing, the art has remained almost stationary, is not founded in truth. On the contrary, it seemed to him that the tendency and efforts of the present day are rather to give to the art more and more the impress of science. The two are not and cannot be synchronous in their evolution, as has already been shown. If, then, we pass by anatomy, the present state of which borders closely on perfection, and if we also omit physiology and pathology, which in reality are but the two extremes of the same branch of science, and in which the most wonderful advances have been, and still are, going on, and confine our illustrations to clinical medicine and surgery, we shall find the special improvement so abundant as almost to be confusing in the numeration.

And first, look at the constantly increasing certainty in diagnosis. The microscope, the test-tube, the thermometer, and various other appliances of science, have given us an insight into disease that a century since would have been deemed simply chimerical. The distinction has been closely drawn between diseases that were formerly considered identical; and new diseases, by the same process, have been added to our nosology.

Auscultation and percussion; the use of the ophthalmoscope and microscope, and many other improvements, are the direct results of the introduction of the methods of the physical sciences into the province of medicine, and there is some danger, perhaps, in the tendency which of late years has been evident, to rely so largely upon an exclusively physical diagnosis. Equally important advances, however, have been made by a comparison of the results obtained in pathological investigation with the objective signs of disease. In this way the lesions of the brain and spinal cord and all the internal organs; the mechanical origin of certain diseased states, such as follow obstructions in the circulation of the blood, as in thrombosis and embolism; the relations of local affections to constitutional states, with the important bearing thereof upon prognosis,—all this and much more valuable information is now permissible even from the clinical history alone of a patient.

Outside of diagnosis, the evidences of advance are not less numerous, and are of equal importance. Ovariotomy, at first decried and opposed in the most virulent manner, has been recognized as a legitimate operation in surgery, and yearly it now saves hundreds of lives that, but for this mode of interference, must have soon ended. Anæsthesia has put an end to the torture under the knife of the surgeon, has become a most powerful agent in the management of convulsive and painful nervous disorders, and has abolished the sufferings of parturition, although this application of its beneficent power was at first deemed impious and Heaven-defying. Hypodermic medication has given a promptness and efficacy to the action of remedies that could not be secured in any other way. The conservative influences of surgery are seen in the resections of joints and the saving of limbs that but a few years since were inevitably sacrificed. In the single department of urethral and cystic diseases, the surgeon of to-day has at his command means of saving life and mitigating suffering that alone are enough to place the art of to-day high above that of any preceding age. In medicine, the researches of Fox, and Sanderson, and Villemin have thrown a flood of light upon the origin of tubercle, and have largely modified our views of the nature of phthisis. The relations of syphilis to degenerative changes and early decay are becoming well understood. A clear line of separation has been drawn between diseases proper and the processes of degeneration that are peculiar to adult and old age, and the often conservative nature of such degenerations has been distinctly proven. The origin of typhoid fever has been traced to foul sewage and the impregnation of drinking water with fecal matter. The connection between septicæmia and impure air has been so universally demonstrated that it has become a serious question whether, in many instances, our hospitals and asylums are anything more than agents of destruction. The bearing of soil-moisture upon the prevalence of consumption has been made an especial study in our own land, and a steady diminution in the number of cases has followed the removal of the cause. The modes of the communication of contagious diseases are ascertained, and the prevention of their spread is entirely within control, provided only that sufficient power be delegated by the state authorities. Oesterlen was right when he said that, "in point of actual knowledge even a Celsus or a Hippocrates, a Boerhaave or a Sydenham, would be a smatterer in comparison with any practical physician or physiologist of the present day;" and let us not forget that all this is a logical outcome from the adoption of methods which have done away with many sources of error that were prevalent in former times.

Prof. Dunster then spoke of the illogical method of our medical education, and as follows concerning the future of medicine: It needs no skill in prophecy to assure us, that, so long as she clings to the methods which logic has established, her progress must be continuous; for although much has already been accomplished, especially since she has entered upon the era of positive knowledge, or, in other words, has adopted scientific and logical methods in her work, there still remains an unexplored field which, properly worked, must yield results that we can now hardly dare to conceive of. From past experience to new circumstances, it is universally conceded we can only argue in accordance with an observed uniformity in the order of events. Unless such uniformity existed we could infer nothing. There need be no misgivings as to the future; nor, on the other hand, need we reproach ourselves that the advance is not more rapid.

It is an easy matter to surmise the direction in which the greatest advances will be made in the future, though the mind is dazzled in attempting to reach the degree of advance. As to the first, the greatest deficiencies are, curiously enough, in the two departments of clinical medicine which are respectively the beginning and the end of the physician's study and work; viz., ætiology and therapeutics. In the intermediate departments of pathology, diagnosis, and prognosis, our knowledge, though by no means perfect, is more advanced than in either of the other two; and it is a striking illustration of the principles attempted to be shown in this paper, that our information is most exact in that section where the demands of logic have been most nearly conformed to, or, to state it differently, where the laws of applied science have been made to bear upon the investigation of disease. In the first two of these divisions of clinical medicine the principal means of further advance will be found in organic chemistry and the physical sciences. In prognosis, reliance must be had on a more

complete study of the natural history of disease, etc. In therapeutics—the final and supreme stage of medicine—as Sir Thomas Watson styles it, there is the most work to be done; our only knowledge now is that of experience. We are almost in entire ignorance both of the mode of the operation of medicines and the intimate nature of the changes they produce in the system; and this cannot be otherwise so long as ætiology remains in its present lamentably deficient condition. To isolate morbific principles, and to ascertain the exact nature of all disease-producing agents, and to learn accurately the initial changes wrought by them, are clearly the preparatory steps to an acquaintance with the laws of the cure, not the recovery, of disease. But even this knowledge is not impossible; there can be no doubt that sooner or later the laws underlying the therapeutic actions of remedies will be reached; that there are such laws it seems to me is indisputable; for law, which is not a self-acting agent, but only the expression of God's will in the workings of the universe, is present and acting everywhere and under all circumstances; and as in the past and the present, so it will be in the future that the impediments in searching out these laws will be found to lie less in the intrinsic difficulties of our subject than in the erroneous and illogical methods of conducting investigation into them. The future, then, is full of promise; and we may well content ourselves with the reflection that as centuries upon centuries have been spent in bringing about our present advanced position, so hereafter each successive decade will give a steadily increasing development. I plead for the entire abandonment of all faulty methods of investigation and reasoning, and for a still firmer alliance with those which in other quarters have produced such solid and brilliant acquisitions; for a diminishing reliance upon the "blind gropings of empiricism," and a still closer affiliation with the whole temper of modern science; for the exclusion of all fallacies, and the adoption of every safeguard which can indicate a wrong direction in our labors; for the final displacement of self in the interpretation of the phenomena of life, and the concentration of all our powers in searching out and verifying the laws which govern the relation and succession of those phenomena; in a word, I plead for the incorporation into all our studies and all our work of the logic of medicine.

The Academy then adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 27, 1872.

DR. A. L. LOOMIS, PRESIDENT, in the Chair.

(Continued from Page 67.)

INTERESTING CASE OF HEART AND BRAIN DISEASE.

DR. LOOMIS exhibited specimens of the heart, kidney, and a portion of the brain taken from a German tailor who was admitted into Bellevue Hospital the 18th of November. This man said that he had always been well up to five months ago, but that four or five years ago he had had intermittent fever, from which, however, he readily recovered. Five months ago, after exposure to cold, he began to cough and to spit blood. He also noticed that he passed more than the usual quantity of urine; that he was rapidly growing weak; and that he suffered somewhat from dyspnœa and shortness of breath on exertion. About four weeks previous to admission, he noticed that his feet began to swell, and that at the same time the urine became scanty and high-colored. There was also some pain in the back; the dyspnœa was more urgent than before; and his face became swollen in the morning. At the time of admission he was extremely anæmic. There was dyspnœa only on exertion, and there was then neither cough nor expectoration. He had no œdema of the feet or of the face. His abdomen was swollen and tympanitic. There were evidences of a slightly enlarged liver; and the upper portion of his abdomen was more prominent than the lower portion, especially in the epigastric region. His pulse was feeble but not accelerated. He complained only of extreme weakness and dyspnœa on the slightest exertion.

On auscultation, the heart was found to beat in the sixth intercostal space, an inch to the left of its normal site. The impulse was indistinct and was diffused over an abnormal area, there being a somewhat indistinct heaving sensation over the whole precordial space. There was a murmur before the first sound, heard with greatest intensity at the apex. There was another murmur with the first sound, very loud, carried around to the left, and heard distinctly at the lower end of the scapula; also, a murmur heard at the base, more blowing in character, conveyed upwards, and heard in the carotids. The diagnosis of mitral obstruction and regurgitation was made. The question of aortic obstruction was raised, but not satisfactorily answered. There was no murmur with the second sound.

The urine contained albumen and granular casts.

He finally became more stupid than patients generally are in his condition; his mind seemed to be sluggish. There was no aphasia present; at least such a condition was not noticed by any who saw him.

On making the autopsy, the heart was found increased in size in all directions. The left ventricle was a little less than its normal thickness. Upon one portion of the aortic valve there were vegetations a quarter of an inch in length. These valves were found slightly deficient. There were vegetations upon the mitral valves of considerable size and having a calcareous feel; the orifice itself being somewhat diminished. These vegetations seemed to be upon the ventricular surface for the most part, and apparently extended into the cavity of the ventricle. The coronary artery was found obstructed by an embolus. The right side of the heart was dilated, but the walls were not thickened. Dr. L. remarked that there ought to have been an aortic regurgitant murmur. If present, it must have occurred after the closure of the aortic valves, and might have been the pre-systolic murmur which he supposed to indicate the mitral stenosis.

Upon the surface of the kidney there was a distinct depression which corresponded to an obstruction in a branch of the renal artery, which was evidently of a calcareous origin, and which had given rise to an infarction beyond.

In the brain corresponding to the Island of Reil, was an infarction which occupied the whole of that portion of the brain, and should have given rise, according to present theories, to aphasia.

ANEURISM PRESSING ON RECURRENT LARYNGEAL—LARYNGOTOMY AND NO RELIEF FROM SPASM.

DR. LOOMIS presented a second specimen which was of interest as regarded a diagnosis, the latter not having been made during life. It was removed from a woman, aged forty-five, who was admitted into Bellevue Hospital November 23d, with the statement that ten years ago she had an attack of acute articular

rheumatism; that she was under treatment for the same in the wards of Bellevue for three months; that two years after she had an attack of pneumonia, from which she recovered. With these exceptions, she had been perfectly well up to three weeks before admission, when she noticed that she was short of breath on going up-stairs. She had also some cough and expectoration, with febrile excitement and pain in the chest. On exposure to cold the cough would become quite violent, and was always attended with expectoration. Two weeks before admission she fell suddenly to the floor in a fit of dyspnœa. Her difficulty of breathing was so great that her friends thought that she was dying. She recovered in the course of two hours, and was only left with a cough which was a little more severe than before, and had a stridulous character. Four days after that another paroxysm, of the same character, came on, which lasted an hour and a half. While preparing to go to the hospital, she was seized with another attack while in the carriage, and she had not recovered from it when admitted. Her lips were blue; she was intensely cyanosed; and there was a peculiar crowing sound on inspiration. A drop of nitrite of amyl was administered in chloroform by inhalation, but it did not seem to have any special effect. The paroxysm finally passed off of itself. On her recovery, she stated that she had no pain.

On physical examination, no evidences of disease of the lungs were found. Knowing that this character of inspiration generally accompanied aneurism, with pressure upon the laryngeal nerve, a careful examination was made accordingly, but with a totally negative result.

The patient went on comfortably until the morning of the 24th, when the House Physician, Dr. Bangs, made a laryngoscopic examination of the patient. When the mirror was passed back into the throat, a paroxysm of dyspnœa came on more violent than either of the others. So urgent did her symptoms become that the doctor prepared himself for laryngotomy. Dr. Bangs, by subsequent examination, ascertained that the vocal cords were normal as to appearance. At his next visit, Dr. Loomis passed his finger into the posterior portion of the throat, down to the epiglottis. He touched that organ, but before he could remove his finger a very severe paroxysm came on. This one lasted an hour and a half. The morning of the following day (25th) she was seized with another, which lasted two hours. She was then in a comatose condition, or rather unconscious; was almost pulseless; her extremities were getting cold; her eyes did not respond very well to light; her lips were blue, and she seemed to be dying. Dr. Bangs performed laryngotomy, but the operation, strange to say, did not give her the expected relief. Artificial respiration was kept up two or three hours before the blueness passed off, and during this time she was unconscious. She finally began to breathe easily, but only for three hours, when another attack came on. After clearing the tube and irritating the larynx, the paroxysm gradually passed off, but she breathed only imperfectly until the following morning, when she died.

On making a post-mortem examination, the heart was found larger than normal. Passing up from the base of the heart, an aneurism was found given off at the junction of the transverse and descending portion of the aorta, and pressing downwards upon the recurrent laryngeal nerve. It also pressed upon the left bronchus, not sufficiently, however, to interfere with the passage of air through it. At the point of pressure, however, there were some evidences of recent inflammation. The case was made plain enough by the autopsy, except the fact that the introduction of a tube below the vocal cords did not entirely arrest or prevent a paroxysm. A question naturally arose in connection with this case as to the propriety of an operation.

Dr. Janeway remarked that his experience did not justify such a procedure. He had met with three cases in which an operation had been performed: the first died a week after from pneumonia, and the second lived but a day.

Dr. Post thought that the operation was justifiable if life was only prolonged a few hours, especially as the operation was not attended with any injurious consequences.

Dr. Loomis could not explain why the introduction of a tube in the larynx did not relieve the dyspnœa, allowing that said dyspnœa was produced by closure of the vocal cords by pressure upon the inferior laryngeal.

Dr. Janeway remarked that during one of these paroxysms he asked the patient her name, when she gave it to him, thus showing that the muscles of phonation were not involved. If the paroxysm were due to pressure upon the inferior laryngeal, he did not see why the voice-sounds were made. In that view he could not understand why one function of an affected nerve remained perfect while the other was temporarily extinct.

Dr. Sands thought that inasmuch as the introduction of the tube did not relieve the dyspnœa, it might depend upon pressure on the bronchus, the aneurism being large enough to make a tangible impression upon that tube.

Dr. Loomis stated that whenever the patient became excited by the presence of a stranger or any other cause, a paroxysm would occur. This fact gave plausibility to the explanation offered by Dr. Bangs, to the effect that at such times the heart was excited, and distended the tumor sufficiently to hinder the entrance of air into the lungs.

Dr. Castle, in this connection, said that the mode by which dyspnœa is produced is not fully understood, and referred to some remarks made by Dr. Brown-Séquard before the Journal Association. That gentleman, speaking of artificial respiration through a tube in the trachea, remarked that the moment a current of carbonic acid gas was passed in a reverse direction over the vocal cords, violent respiratory efforts were made. Dr. Castle had frequently noticed, in the performance of similar physiological experiments, that if he compressed the nares of a dog, even when air was being forced freely through the tracheal tube and the animal was making no respiratory movements, respiratory efforts would at once commence.

Dr. Jacobi remarked, that so long as there was difficulty only in inspiration, the voice did not necessarily become extinct, a circumstance often seen in croup.

Dr. Loomis stated that the laryngoscope showed no paralysis of the vocal cords.

Dr. Janeway thought that the pressure upon the bronchus was very inconsiderable compared with some cases which he had seen, and in which no paroxysmal dyspnœa was present. In one instance to which he referred, one bronchus was for a time completely blocked up by a clot from a ruptured aneurism.

Dr. Putnam did not think that the pressure should be excessive to produce such paroxysms.

Dr. Markoe referred to the interlacement of the fibres of the pneumogastric with some of the descending branches from the sympathetic, which encircles and lies pretty close to the bronchial tubes. If that plexus were subjected to pressure by an aneurismal tumor, a spasmodic, or rather perverted action might be re-

flected to all those portions of the pulmonary apparatus supplied. This might explain the persistence of the paroxysms despite the free entrance of air through the tube in the larynx.

The Society then went into executive session.

Correspondence.

MEDICAL EDUCATION AND HARVARD UNIVERSITY.

DEAR SIR—In an article published in the MEDICAL RECORD a short time since, many good suggestions were made in regard to Medical Education, and the hope was expressed that they would attract the "attention of those concerned with the future education of our medical men," so that they might "judge how far such changes are feasible."

Though "important changes that have taken place in one of our sister colleges" are alluded to, they are apparently not recognized as of special interest in connection with the points so strongly insisted upon in the article.

Fearing that the Prospectus of the Medical School of Harvard University may not show as clearly as it should the character of the instruction given, I hope you will pardon me for saying that a year's experience in the kind of teaching you advocate, has proved it to be not only feasible but a complete success.

In addition to the didactic lectures usually given in Anatomy, Dissection is required, and the student receives from a special teacher, in a laboratory arranged for the purpose, personal instruction in Histology, both normal and pathological. In this exercise each student uses his microscope and is taught all the details of its management, and of the preparation of specimens. In Physiology also the more advanced students have opportunities to work in the Physiological Laboratory.

In Chemistry the greater part of the time is spent in the laboratory.

In Auscultation and Percussion and in Laryngoscopy a separate instructor gives the most thorough drill upon actual cases.

In Clinical Medicine the instruction is strictly practical, cases being supplied which the students must make out without aid, and report before the class, and this is done during nine months of the year. In the same way the student is drilled in operative surgery and all surgical manipulations. If he leave the school without, as you suggest, any "practical acquaintance with Ophthalmology and Otology," it must be his own fault, as he has abundant opportunities to learn both in the most practical manner.

All the above, usually treated as accessories to a proper medical education, are here a part of the regular systematic course, as much as the lectures or recitations.

You will therefore see how inapplicable to us is the statement "that even in our largest cities, where cultivation and refinement rank highest, and where the demands on our profession are as exacting as in any part of the civilized world," the medical colleges do not "furnish us with thorough theoretical and practical instruction in all branches of medicine practised among the profession at large."

The true way to meet the objection "that the student's time is fully occupied with courses recommended," is to so distribute and arrange his labors as to avoid the inevitable *waste* of time involved in the prevailing American system. Yours very truly,

C. ELLIS,
Medical Department of Harvard University.

BOSTON, *January*, 1873.

TABLE OF DEATHS BY PHTHISIS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR.—As supplementary to the valuable paper by Dr. Flint, in your last issue, I beg to present a Table of Deaths by Phthisis in this city, for three years, so arranged as to exhibit the relative mortality of various professions. The years 1869, 1870, and 1871 are selected on account of their extending over a period equally preceding and subsequent to the time of the last census, and therefore by compensation affording a fair average. The list embraces only those callings which correspond in both the census returns and the statistics of this bureau for the years specified.

Respectfully,

CHAS. P. RUSSEL, M. D.

Bureau of Records of Vital Statistics,
New York, February 7th, 1873.

TABLE showing the influence of various occupations upon Phthisis Pulmonalis, in New York city.

OCCUPATION.	Number of Persons engaged in (Census of 1870.)	Average Number of deaths annually by Consumption, in 1869, 1870, 1871.	Deaths by Consumption in each 1,000 persons.
Laborers (including quarrymen, agricultural laborers and porters)	28,700	329.3	11.5
Coopers	1,606	13.6	8.5
Machinists (including blacksmiths and metal workers)	11,178	92.3	8.2
Lawyers	1,283	10.0	7.8
Seamen and watermen (including sailors and steamboatmen)	4,463	34.6	7.7
Boot and shoemakers	6,960	54.0	7.7
Barbers (including hairdressers)	2,549	18.3	7.2
Carmen (including coachmen and teamsters)	9,813	69.3	7.1
Printers	5,134	36.0	7.0
Painters (including varnishers)	5,824	40.0	6.9
Masons and stonecutters	6,586	44.6	6.8
Carpenters (including cabinetmakers, upholsterers and joiners)	15,498	103.0	6.6
Dressmakers (including milliners, mantua-makers, tailoresses and seamstresses)	18,614	120.0	6.4
Teachers—female	2,173	13.0	6.0
Tailors	9,696	55.6	5.7
Bakers	3,855	21.3	5.5
Bookbinders	2,256	12.0	5.3
Cigar makers (including tobacco workers)	5,550	29.0	5.2
Domestic servants	49,440	253.0	5.1
Butchers	4,870	22.3	4.6
Clerks (including salesmen and accountants in stores, banking, brokerage, insurance and manufacturing establishments, and civil employees of government)	37,432	163.0	4.6
Hatters (including hat and cap makers)	1,744	6.6	3.8
Physicians and surgeons	1,741	6.6	3.8
Peddlers (including hucksters and commercial travellers)	4,744	18.6	3.8
Merchants (including traders and dealers)	28,872	75.3	3.1
Stablemen (including livery stable keepers and hostlers)	1,278	4.0	3.1
Teachers—male	1,298	3.0	2.2

ENORMOUS FATTY DEGENERATION OF LIVER, Etc.

To the Editor of the Medical Record.

Sir—At a meeting of the Pathological Society, reported in a recent number of your Journal, I had the honor to submit a case of malignant icterus, with fatty infiltration and degeneration of the liver, but also enormous hypertrophy instead of the acute atrophy usually found in such cases. I have since found a similar case related by Wunderlich in the *Archiv für Heilkunde*, 1863, and quoted in the *Archives Générales* for the same year. In this case, death occurred after symptoms similar to those I have described, and at the autopsy was found an enormous fatty degeneration of the liver and kidneys, with sanguinolent effusions in the subserous cellular tissue.

It would appear therefore that the liver may become shrunken and softened, with its cells reduced to a fatty granular detritus; or, enormously enlarged, with only partial destruction of its elements, while the remainder appear distended and *infiltrated* with fatty globules. I am, sir, yours truly,

Mary C. Putnam, M.D.

328 E. 15th St.

New Instruments.

A NEW FORCEPS.

By H. LÖWENTHAL, M.D.

Some of our most distinguished writers and teachers on obstetrical subjects have recommended that the study of the forceps be more cultivated, because they are the means of saving in extraordinary cases one or two human lives. The consequence of these recommendations has been the invention of a host of new forceps, all for the purpose of facilitating the application and of increasing the effect of this valuable instrument.

Some made a new lock, others changed the length of the blades, the size of the shafts, the move of the handles; others, again, thought small fenestræ in the blades would be more efficient, or broad blades would hold the fœtal head more securely than narrow ones; others finally changed the curve of the blades, made two curves, or one curve, or none at all, and so on. But to show to the profession that those hints were not lost on me, I tried to find out how it were possible to apply a forceps without subjecting the mother (and often the operator) to the difficulty of applying the second or right blade and locking the forceps; in other words, I tried to find a forceps whose blades could be introduced at once, and by which the head of the child could be caught by rotating one blade around and away from the other; and I give you in the accompanying cut an idea of the instrument I had made. I have tried it on the phantom, and finding it perfectly successful, I offer it to the profession, knowing full well that there is a great deal of room for improvement, as regards the length and width of the blades, and the curves of the same.

I shall now endeavor to show in what way my instrument is superior to all the others.

I do not think that there is any necessity for speaking of the effect of the obstetrical forceps in general, since almost every medical journal of the last year or two contains essays on the same subject, written by more able and more experienced authors, but I shall only mention that just these essays brought me to the idea of having my forceps constructed.

The forceps should act as tractor, as compressor, and as lever, and I think the arrangement of the lock of my forceps meets these claims best of all.

The lock, being solid and stationary, is more apt than

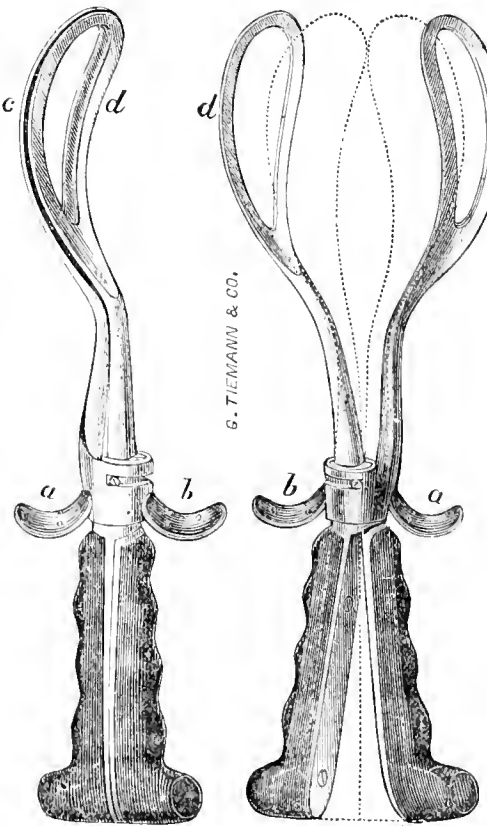

Fig 1. Fig 2.

any other to procure for the operator a steady traction; the blades, working around a joint, will give a higher degree of compression than any other (without being too much in that direction, because if the head were too large, the rotation of the blades could not be accomplished), and the whole instrument being straight, and the handles, working as it were like one piece, will give a greater amount of leverage than any instrument the handles of which have to be compressed by the hands of the operator in order to steady the instrument.

So much in regard to the general application of the forceps; but there are a few new points to be remarked in my instrument, which are well worth being mentioned. First of all, it does away with the introduction of the second blade. Every medical man who has been called upon to apply the forceps will agree with me that the greater difficulty is always in the application of the second blade and the locking of the instrument. After you get the first blade in position, you will have to intrust its handle to some assistant (usually an inexperienced woman) to hold and steady it, and at the same time keep it out of your reach, not to hinder you in applying the other blade. While you are busy in doing so, this assistant will move or let go the handle, and thereby necessitate adjustment of it again, before you can proceed with your work. Finally you have

both blades in position, and try to lock them, but you find some difficulty in doing so: you will have to move either the first or the second blade, and sometimes not with inconsiderable force, thereby risking the making of abrasions on some part of the child's head. All these difficulties are done away with: you introduce your instrument as you do the first blade of any of the other instruments. There is usually very little resistance: then seize hold of both handles with one hand, and rotate the instrument either to the right or to the left, either around the anterior or the posterior half of the pelvis, and as soon as the two blades come opposite to each other, with a click the lock will close, and you can commence traction, or use leverage, at your discretion, as the case might be, without fear lest the instrument might open, or the blades might move, and without using any force to compress the handles, as with other instruments. This instrument, as I present it now, could be made of any length, but I intend to use it as a straight forceps, and shall always follow the old rule of putting the mother across the bed on her back, bringing the nates close to the edge, thereby giving the most space to the operator.

In closing this explanation I do not need to give any further description of the forceps, as the construction of the blades, or handles, or shafts, has nothing new, nor is it necessary to give further directions for the use of the instrument, since it is so simple that every practitioner who has ever handled a pair of forceps before, will at once understand the workings of this new one: the only point to be noticed, if you want to rotate the outer blade around the posterior half of the pelvis, is to steady the instrument on both sides at the horns of the handles with one hand, and rotate the instrument by grasping the lower end of the handles with the other; on the other hand, if you want to rotate the inner blade around the anterior half of the pelvis (behind the os pubis), you steady only the one handle and rotate with the lower end of the other, or, as the cut shows, in the first case, steady the instrument, by putting one hand around *a*, *b*, and rotate blade *c* backward; in the second case, steady only handle *b*, and rotate blade *d* forward.

91 Second street.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 19, 1873, to *February* 4, 1873.

McMillin, Thos., Assistant Surgeon.—To accompany batteries of 4th Artillery, under orders for field service in Oregon. S. O. 5, Department of California, January 10, 1873.

De Witt, C., Assistant Surgeon.—To accompany Troop "K," 1st Cavalry, from Reno, Nevada, to Camp Bidwell, California, and on arrival, report to the Commanding Officer of that Post for duty at Camp Bidwell, or in the field. S. O. 12, Department of California, January 20, 1873.

Campbell, A. B., Assistant Surgeon.—Assigned to temporary duty in Chicago, Ills., to examine recruits. S. O. 21, War Department, A. G. O., January 25, 1873.

Weisel, D., Assistant Surgeon.—Assigned to duty at Fort Johnston, N. C. S. O., 14, Department of the South, January 22, 1873.

Medical Items and News.

Death of James L. Brown, M. D.—This well-known gentleman died suddenly from pneumonia, on the morning of Tuesday, February 4th, 1873, in the 42d year of his age.

At the stated meeting of the New York Academy of Medicine, held February 6th, 1873, Dr. Austin Flint, President, in the chair, Drs. T. Gaillard Thomas, E. R. Peaslee, Jas. Anderson, W. M. Chamberlain, and Jerome C. Smith, made eulogistic remarks concerning the deceased.

On motion of Dr. Thomas, a committee of three were appointed by the Chair to draft resolutions; consisting of Drs. Thomas, Chamberlain, and Smith. The committee retired, and subsequently presented the following resolutions, which were unanimously adopted:—

Whereas, it has pleased an all-wise Providence to remove from our midst our beloved fellow and associate, Dr. James L. Brown, therefore be it

Resolved, that by the death of Dr. Brown the Academy of Medicine has been deprived of a member, who, by his zealous and intelligent co-operation in all its labors, has proved himself a most valuable and esteemed associate.

Resolved, that the character of Dr. Brown, both in his professional and social relations, has always been such as to command our highest respect and warmest friendships, and that we regard his removal in the midst of an active and useful career, as an unusually great loss not only to ourselves, but to the profession at large.

Resolved, that we tender our most sincere and heartfelt sympathy to the family of Dr. Brown in their deep affliction.

Resolved, that a copy of these Resolutions be sent to the bereaved family, and that they be published in the medical journals of this city.

Austin Flint, M.D.,
President.
Wm. T. White, M.D.,
Secretary.

At a meeting of the students of the College of Physicians and Surgeons, New York, held February 5th, 1873, the following resolutions were adopted:—

Whereas, the students of the College of Physicians and Surgeons have learned, with deep regret, of the death of Dr. James L. Brown, Clinical Assistant to the chair of Obstetrics and Diseases of Women and Children in this Institution; therefore,

Resolved, that, while they recognize in that fact, the dispensation of an all-wise Providence, they appreciate the great loss which has thereby fallen on the College and the profession at large.

Resolved, that they also desire to express to their honored Professor of Obstetrics and Diseases of Women and Children, their appreciation of the loss he has sustained in the death of his able assistant.

Resolved, that a copy of these resolutions be transmitted to the family of the deceased, to Professor Thomas, and to one or more of the Medical Journals.

Resolved, that a committee of two be empowered to carry out the provisions of these resolutions.

George L. Peabody,
Arthur Mead Edwards,
Committee.

College of Physicians and Surgeons,
New York, February 5th, 1873.

February Meeting of the Medical Society of the County of New York:—At the next meeting of the County Society, to be held on the 24th inst., Dr.

John C. Peters is expected to read a paper having reference to the last (5th) revision of "The Pharmacopœia of the United States of America."

Members of the College of Pharmacy are invited to be present and take part in the discussion of the paper.

New York Academy of Medicine.—At the meeting Feb. 20, there will be "A Discourse on the Indications for General Pathology in Diseases of the Eye, with Illustrations by the Magic Lantern," by Prof. H. D. Noyes, M.D.

At the annual meeting of the Hudson County Medical Society, the following officers were elected for the ensuing year:—*President*, Dr. M. A. Miller; *Vice-President*, Dr. J. D. McGill; *Secretary*, Dr. Henry Mitchell; *Treasurer*, Dr. H. H. Abernethy; *Reporter*, Dr. J. E. Culver.

Jersey City Pathological Society.—At the annual meeting of this society, held January 9th, 1873, the following members were unanimously elected officers for the ensuing year: *President*, H. Mitchell, M.D.; *Vice-President*, F. G. Payn, M.D.; *Secretary*, T. J. McLoughlin, M.D.; *Treasurer*, J. D. McGill, M.D.; *Committee on Microscopy*, A. B. Watson, M.D., F. G. Payn, M.D., and J. D. McGill, M.D.

New Law Relating to Examination of Candidates for the Degree of Doctor in Medicine, Passed May 16, 1872.—

Section 1. The regents of the university of the State of New York shall appoint one or more boards of examiners in medicine, each board to consist of not less than seven members, who shall have been licensed to practise physic and surgery in this State.

§ 2. Such examiners shall faithfully examine all candidates referred to them for that purpose by the chancellor of said university, and furnish him a detailed report in writing of all the questions and answers of each examination, together with a separate written opinion of each examiner as to the acquirements and merits of the candidates in each case.

§ 3. Such examinations shall be in anatomy, physiology, materia medica, pathology, histology, clinical medicine, chemistry, surgery, midwifery, and in therapeutics, according to each of the systems of practice represented by the several medical societies of this State.

§ 4. The said reports of examinations, and the annexed opinions of the examiners, shall forever be a part of the public records of the said university, and the orders of the chancellor addressed to the examiners, together with the action of the regents, in each case, shall accompany the same.

§ 5. Any person over twenty-one years of age, of good moral character, and paying not less than thirty-five dollars into the treasury of the university, and on applying to the chancellor for the aforesaid examination, shall receive an order to that effect, addressed to one of the boards of examiners, provided he shall adduce proofs satisfactory to the chancellor, that he or she has a competent knowledge of all the branches of learning taught in the common schools of this State, and of the Latin Language, and that he has diligently studied medicine, not less than three years, under the direction of one or more physicians duly qualified to practise medicine, or has himself been licensed, on examination, by some medical society or college legally empowered to issue licenses or degrees in medicine.

§ 6. The regents of the university, on receiving the aforesaid reports of the examiners, and on finding that not less than five members of a board have voted in favor of a candidate, shall issue to him or her a diploma, conferring the degree of doctor of medicine of the university of the State of New York, which degree shall be a license to practise physic and surgery.

§ 7. The candidate, on receiving said diploma, shall pay to the university the further sum of not less than ten dollars.

§ 8. The moneys paid to the university, as aforesaid, shall be appropriated by the regents for the expenses of executing the provisions of this act.

§ 9. The regents may establish such rules and regulations, from time to time, as they may deem necessary to insure the faithful execution of the provisions of this act.

This act shall take effect immediately.

The Gorilla.—The Directors of the Museum of Bale, Switzerland, are merry over the acquisition of a skeleton of a gorilla, costing the sum of 4,000 francs. For several years past the visitor to the museums of Amherst College, Massachusetts, has noticed two splendid specimens of the gorilla—one being a wired skeleton, the other a full-grown dermatological subject. These were donated by a missionary in Africa, an alumnus of the college.

New Publications.

A Treatise on the Theory and Practice of Obstetrics. By Wm. H. Byford, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children in Chicago Medical College, etc., etc. Second Edition, thoroughly revised. New York: William Wood & Co. 1873. Pp. 469.

The Pharmacopœia of the United States of America. Fifth Decennial Revision. Philadelphia: J. B. Lippincott & Co. 1873. Pp. 383.

Fistula, Hemorrhoids, Painful Ulcer, Stricture, Prolapsus, and other Diseases of the Rectum; their Diagnosis and Treatment. By William Allingham, F.R.C.S., Surgeon to St. Mark's Hospital for Fistula, etc. Second Edition, revised and enlarged. Philadelphia: Lindsay & Blakiston. 1873. Pp. 265.

A Treatise on Apoplexy, Cerebral Hemorrhage, Cerebral Embolism, Cerebral Gout, Cerebral Rheumatism, and Epidemic Cerebro-Spinal Meningitis. By John A. Lidell, A.M., M.D., ex-Professor of Anatomy in the National Medical College, Washington, D. C., etc., etc. New York: William Wood & Co. 1873. Pp. 395.

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Original Communications.

SOME OF THE RECENT RESEARCHES IN PATHOLOGY.

BEING REMARKS MADE BEFORE THE MEDICAL LIBRARY AND JOURNAL ASSOCIATION OF NEW YORK.

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NEW YORK.

MR. PRESIDENT AND GENTLEMEN.—More than four years ago I had the honor of reading before this society a paper on a similar subject to the one I present this evening.* I then brought before the Society, and before the profession of this country, the results of the remarkable researches of my friend Prof. Cohnheim, with reference to inflammation and suppuration, and endeavored to demonstrate the emigration of the white blood-corpuscles through the intact walls of the blood-vessels. I mentioned on that occasion, that not alone the facts discovered by Cohnheim are of the highest importance, but that also his method will open a new field for further investigations and discoveries. I myself applied his method with some success, as related in the paper alluded to; but the most important application was made by Cohnheim himself for elucidating the mechanism of the embolic processes.† The doctrine of *embolic processes* has been so thoroughly studied from an anatomical, pathological, and clinical point of view by its great discoverer, Virchow,‡ that scarcely anything could be added by his numerous followers. Nevertheless, one point remained unexplained, viz., the mechanism of these processes—the modus operandi of emboli. Why do the consequences of embolism differ so widely? Why in some cases is embolism harmless, when in others it produces necrosis and gangrene, hemorrhagic infarctus or abscess? Though embolism may take place in every region and organ, yet in the brain and the extremities it almost always produces necrosis, while in the spleen and the lungs it calls forth hemorrhagic infarctus, which, however, does not occur in the muscles, in the skin, or in most of the glands.

To study the mechanism of embolic processes, Cohnheim chose such organs as would allow us to observe, under the microscope, the whole process from beginning to end. The tongue of the frog presents the most favorable conditions for such observations, on account of its easy access, its translucency, and the peculiar arrangement of its blood-vessels. The frog's tongue possesses two main arteries (accompanied by veins) which enter near its corresponding margins, traverse in a parallel direction its whole length, and communicate at the apex by an anastomosing arch. Each of these arteries gives numerous branches towards the margins of the tongue, but scarcely any towards the median portion. Another important anastomosis between both lingual arteries exists at the basis of the tongue. In order to call forth embolism, Cohnheim made use of an emulsion containing minute wax globules covered with soot. To produce emboli in the lingual branches, he injected the emulsion into the heart, and, to avoid unnecessary obliterations of other vessels of the body, into the internal section of an aortic arch, from which the carotid and lingual arteries alone originate. By applying during the injection a provisional ligature over the carotid, the mass could only enter the lingual artery.

Having injected the emulsion into the lingual arteries of a woorarized frog, Cohnheim observed that the column of blood in the embolized branch became immovable both in front and behind the embolus, and the main current passed through the collateral branches located more centrally. If the vessel were obstructed suddenly, the immovable column in front of the embolus consisted of aggregated red and white blood-corpuscles; but if the plugging were produced slowly, and the blood-corpuscles therefore had time to be driven out, the vessel contained only plasm, and perhaps a few white blood-corpuscles which stuck to the walls.

The changes in the circulation behind the embolus vary according to circumstances, whether or not the embolized vessel possesses, before its distribution into capillaries, an anastomosing branch with another artery. If it does, the effect of the embolus is perfectly insignificant, because the blood circulates through the collateral artery to the peripheric end of the plugged vessel, excluding only a small portion around the embolus. But when there is no such anastomosis (the embolized artery being a *terminal artery*—Cohnheim), then a complete stagnation of the circulating blood takes place, not only in the capillaries behind the embolus, but also in the veins of the corresponding region, until their confluence with a vein supplied from another source. From this latter vein the blood soon commences to flow, in an opposite direction, into the stagnating vessels, until the resistance from the accumulated blood equals the blood pressure in the vein. This retrograde circulation increases the accumulation of blood in the obstructed region, the result of which is hemorrhage. We observe then the emigration of white blood-corpuscles from the small and medium-sized veins and from the capillaries. From these latter, finally, extravasate also the red blood-corpuscles accumulating outside the vessels and forming the so-called hemorrhagic infarctus. Cohnheim demonstrated, by very ingenious experiments, that the cause of these phenomena lies entirely within the blood-vessels, the vital properties and functions of which undergo a complete change as soon as the normal circulation is arrested. On arresting the circulation in the entire tongue, by applying a loose ligature *en masse* at its basis, all the vessels become enormously dilated, but slowly contract again, and the circulation may be gradually restored if the ligature be taken off during the first day. If it be left during forty-eight hours, the vessels will remain dilated, the circulation therefore retarded, and from all the medium-sized and smaller veins, and from the capillaries, there will be noticed an excessive emigration of white blood-corpuscles, and, finally, of red ones from the capillaries. If the ligature remain still longer (four or five days), the circulation cannot be restored at all; the epithelium, the muscles, and other tissues undergo disintegration, and necrosis of the entire organ follows.

Cohnheim made similar experiments with different organs, especially the ears of rabbits and guinea-pigs, and obtained the same result. Everywhere four distinct stages developed themselves: dilatation of the vessels, emigration, extravasation, and absolute stasis. In all these experiments, the prolonged arrest of the normal circulation at first calls forth an enormously large emigration of white blood-corpuscles, characterized by œdema of the ligatured part, and followed afterward by the emigration of red corpuscles, pre-

* MEDICAL RECORD, July 15th, 1868.

† Dr. Cohnheim. Untersuchungen über die embolischen Processe. Berlin, 1872.

‡ R. Virchow. Gesammelte Abhand. Frankfort, 1856, p. 219.

senting all the features of hemorrhagic infarctus. Colnheim proved, at the same time, that ligature of the organs, with exclusion of the vessels, does not produce the described phenomena.

The ultimate fate of the embolized portion may be as follows: Either the embolus organizes itself, becomes adherent to the wall of the vessel, and exercises no injurious effect upon the corresponding tissues—as is the case when an anastomosing branch enters the plugged vessel behind the embolus, and thus restores the normal circulation.—or, when no such anastomosis exists, the part behind the embolus undergoes either a necrobiotic process (dry or moist gangrene, or simple softening), or hemorrhagic infiltration.

Thus we find in the human subject the conditions favorable for the first sequela, when an artery is embolized below, or in the circle of Willis, or when the seat of embolism is one of the larger branches of the pulmonary artery. We find, further, such a favorable arterial arrangement in the skin, in the muscles, in the fibrous and serous membranes, in the intestinal canal and mesentery, in almost all the glands, in the bladder, sexual organs, bones, in the heart, choroid and iris, in the walls of the respiratory organs, &c. All these organs are so richly provided with arterial anastomoses that the consequences of embolism of a single artery are transitory and insignificant, just as would be its ligation. There is, however, one rare exception, when even in the organs above mentioned embolism will be followed by a permanent disturbance in the circulation and nutrition of the affected organ (gangrene). This happens when, besides the main artery, all its collateral branches become embolized, producing therefore the same effect as if the main artery were a terminal artery. Thus can be explained the occurrence, though extremely rare, of gangrene in the intestinal canal, or in the extremities after multiple embolism in the mesenteric artery, or in the arteries of the extremities.

The organs that possess real terminal arteries, and in which therefore the two last sequelæ—necrobiosis and hemorrhagic infarction—do occur, are the spleen, the kidney, the brain, the retina, and, to some extent, the lungs. In the latter organ the circulation may be completely restored through the interlobular collaterals near the hilus; and here, therefore, infarctus cannot occur, while it may take place at the periphery, where the arteries become terminal. In these last-mentioned five organs, the result of embolism is necrobiosis (without decomposition accompanying gangrene of the parts exposed to atmospheric influence), whenever the conditions are unfavorable to the formation of a hemorrhagic infarction. Thus hemorrhagic infarction does not take place whenever there is an obstacle to the retrograde circulation in the veins, the latter being the real cause of the infarction. This is the case, for instance, when the law of gravitation acts against the retrograde circulation, or in localities where the veins possess valves. Again, whenever the embolus obstructs only partially the artery, an incomplete circulation continues behind the embolus, thus preventing the stagnation of blood and the retrograde circulation—the two necessary conditions for a hemorrhagic infarction. Lastly, a very feeble action of the heart may also prevent the accumulation of blood behind the embolus and the subsequent infarction.

In accordance with the fact that infarctus is caused only by the retrograde circulation in the obstructed veins, it must necessarily appear several days after embolism has taken place. We can easily understand also why the apex of the infarctus does not correspond to the embolus, but to the obstructed vein from which it has originated.

Embolic abscesses are produced by bodies that not only act mechanically, but are also endowed with infectious properties. By injecting minute particles of putrid meat, Colnheim invariably called forth these abscesses, because sooner or later inflammation and suppuration set in around the emboli.

In human pathology we find in the lungs and liver embolic abscesses of a larger size than in all the other organs, where only miliary abscesses are to be found, because in the lungs and liver the emboli originate from the large thrombotic masses of the veins of the extremities and of the abdomen, whereas the emboli of the other organs develop themselves from the minute endocarditic vegetations.

In accordance with Colnheim's experiments, we find in the lungs both embolic infarctus and abscesses. But while the former depend on pure mechanical emboli of terminal arteries, they must necessarily take place at the periphery of the organ, and present a conical shape; the abscesses, on the contrary, may be found in every part of the organ, and always present a globular form.

Chlorosis.

I now proceed to examine *chlorosis*, which has generally been considered as a primary pathological condition of the blood, and by some authorities of this country as a nervous affection. Both these assumptions are erroneous. Chlorosis, according to Virchow,* is based on a congenital, or early acquired arrest of development of the heart and large arterial trunks, especially of the aorta. This primary pathological condition is almost always accompanied by an abnormal development of the sexual apparatus. In the majority of cases the sexual organs are also arrested in their development, especially the ovaries and the uterus, and the menstrual flow is very scanty (amenorrhœa). In some cases, however, an excessive development of the sexual organs occurs with profuse menstruation.

The small size of the heart, which in the earliest infancy corresponds to the abnormal narrowness of the aorta, becomes secondarily hypertrophied from its increased activity in propelling the blood through the narrow canal. This hypertrophy of the heart can also be accompanied by its dilatation, under conditions unfavorable for the nutrition of this organ. Similar anomalies of the heart and aorta are occasionally met with in the male, who may therefore also be affected with chlorosis. If the production of blood be increased in persons with such a narrowness and small capacity of the blood-vessels, the blood-pressure in the aortic system must necessarily increase to a high degree, not only towards the heart, but also towards the periphery. Indeed, during the last ten years Virchow found at the autopsy of all those affected with hemorrhagic diathesis, the above described condition of the vascular system. This certainly explains the excessive menstruation in some chlorotic persons, and also the frequency of chronic ulcers of the stomach in those affected with chlorosis. In regard to the etiology of chronic ulcers of the stomach, it is known that they originate from hemorrhagic infarctions in the walls of this organ. Under normal conditions, the free hydrochloric acid of the gastric juice, being constantly neutralized by the alkali of the circulating blood in the numerous blood-vessels, cannot affect the walls of the stomach. But as soon as the circulation ceases, for instance, in an infarcted place, the free acid acts upon it (self-digestion), producing an ulcer. Therefore, according to the exact investigations of Virchow, the hemorrhagic dia-

* R. Virchow. Ueber die Chlorose. Berlin. 1872.

thesis, purpura, and analogous conditions, are based upon the narrowness of the aortic system and the high pressure under which the blood circulates, thus causing ruptures of the vessels and hemorrhages.

In chlorosis the aorta and the large arterial trunks are not only very narrow, but their walls are exceedingly thin, especially the internal and middle coats. In full-grown chlorotic women, the calibre of the aorta is so small that the little finger cannot be introduced into it. Besides, there is very often a great irregularity in the origin of the arterial trunks, especially of the intercostal arteries from the thoracic aorta. Finally, Virchow very frequently found small indurated protuberances on the internal coat, and especially on that of the abdominal aorta.

It is a general law in pathology that those organs which present an imperfect and faulty anatomical structure exhibit a great disposition to morbid processes, and in chlorotic persons we find such a morbid disposition to various affections of the organs of circulation. The most frequent structural change found even in young chlorotic persons is an extensive fatty metamorphosis of the internal coat of blood-vessels, leading to superficial ulcerations (without suppuration). Still more important, though not so frequent, is the fatty degeneration of the middle coat and of the heart, which explains the occurrence of spontaneous rupture of the large blood-vessels in chlorotic persons. But the most important affection met with in chlorosis is valvular endocarditis. In the majority of fatal cases of endocarditis in earlier life we find a primary undeveloped condition of the aorta, not only in women, but also in men.

The researches of Virchow also explain the frequent complication of chlorosis with puerperal endocarditis and all its consequences, and especially with the most malignant embolic processes. The broken-off detritus of the valvular vegetations are carried by the circulating blood, and produce numerous emboli in single organs, or simultaneously in the kidneys, the spleen, the retina, and choroid. This latter affection was formerly described simply as puerperal ophthalmia. Very probably the puerperal inflammatory rheumatism depends on embolism in the synovial membrane, resulting from such a malignant endocarditis. In young chlorotic persons there exists also a disposition to tuberculosis, but its mechanism is not yet sufficiently elucidated.

Quite recently Quincke* found the amount of hæmoglobin greatly diminished in chlorosis, namely, 5.4 per cent. the normal quantity being 15.5. per cent.

I will state here that I found in a considerable number of chlorotic persons an affection of the acoustic apparatus that has not been mentioned by any author. I repeatedly observed† that after thirty years they suffer from hardness of hearing, slowly increasing to deafness, and sometimes accompanied by tinnitus aurium, vertigo, and other cerebral symptoms. The galvanic reaction of the auditory nerve shows a high degree of torpor. The menstruation in such patients is almost always very profuse. In other cases, again, the deafness in young chlorotics appears suddenly with acute symptoms resembling Menière's disease, and is characterized by hyperæsthesia of the acoustic nerve. I presume that in these cases a hemorrhage in the labyrinth has taken place, owing to the described disposition of such patients to hemorrhages. Lastly, I am inclined to ascribe some paralytic conditions, especially those known as hysterical and infantile paralysis, to hemorrhages in the nervous centres of chlorotic persons. But this latter assumption has yet to be corroborated by more numerous observations, and especially by post-mortem examinations.

From this sketch of Virchow's researches on chlorosis, it is evident that the affection is almost always congenital, at least acquired in early life, and, strictly speaking, is therefore incurable. But there is no doubt that the educated physician can do a great deal and preserve the patient in a state of comparative health, by improving his nutrition, arresting the further development, and even preventing most of the dangerous complications of chlorosis.

Infectious Diseases.

I wish to call the attention of the association to those *parasitic vegetable organisms* which play so important a part in infectious diseases. It is supposed, with a great deal of probability, that in these diseases the fungi excite a process analogous to fermentation, based on the action of these minute organisms, as has been demonstrated by the great discoveries of Pasteur. This striking analogy justifies the name of zymotic diseases, by which the infectious diseases are now often designated.

But in taking up this subject, to which I myself paid much attention, I will omit the numerous researches of Hallier and others, as they are not based on exact scientific observations. I will mention only the results of investigations made with strictest methods by competent observers.*

The first impulse to these researches was given by the investigation of epidemic diseases in plants and insects, where the cause or the contagion was found to be microscopic fungi. In the disease of the grape a fungus, Oidium Tuckeri, is found to inhabit and destroy the grapes. The cause of the disease of potatoes is also a fungus, Peronospora infestans. The epidemic disease of the silkworms is caused by a parasitic fungus, Botrytis Bassiana, which lives on the blood and tissues of the insect, thus causing its death. The epidemic among the common flies happening so often in the fall, is caused by the development of a fungus, Empusa Muscæ, in the living fly. Schoenlein was the first who discovered a microscopic fungus as the cause of a disease in man, and showed that the Achorion produces a characteristic affection of the skin (favus). Since that time several other fungi were found to be the source of some local cutaneous diseases, as for instance the Trichophyton tonsurans, the fungus producing herpes tonsurans and sycosis; the Microsporon furfur—the fungus of pityriasis versicolor, and the Oidium albicans—the fungus of aphthous affections. These vegetable organisms, but especially those which excite infectious diseases, belong to the lowest forms of vegetable life. They do not possess the green vegetable coloring matter (chlorophyte), the function of which is to form the organizable combinations of carbon with hydrogen, oxygen, and nitrogen from the air, water, and inorganic mineral matter. Their life therefore depends entirely on the presence of preformed organic substances, plants or animals. They vegetate either in living organisms, and are called parasites, or in dead ones undergoing decomposition and putrefaction—Saprophytes. One group of these vegetable organisms does not strictly belong to real fungi; it i composed of very minute bodies of a still simpler organization, and classified under the name of Schizo-

* Virchow's *Archiv*, 1872, B4. LIV., p. 537.

† Neftel. Gehoerstoerungen bei Chlorose und Morbus Brightii. Centralbl. fur die med. Wissensch. 1872, No. 53.

* F. Stendener. Ueber pflanzliche Organismen als Krankheitserreger. Saml. Klin. Vortrage. Leipzig, 1872.

mycetes. They have a globular, oval, or cylindrical shape, and multiply by continually dividing into two in a right line, never producing branches. They are either quite immovable, or else exhibit a very vivid or an oscillating motion. Their growth is in a linear direction, forming long rods or chains of small globular cells, which sometimes are conglomerated by a gelatinous mass into a large, irregular, immovable lump called Zoogloea. In this latter condition the cells still continue to multiply. They seem not to possess special organs of reproduction, and the preservation of the species is effected through the evaporation of fluids in which the Schizomycetes exist. In this way they enter the air with the vapor, and there remain suspended until they come in contact with suitable fluids, in which they recommence to multiply by division.

These Schizomycetes are bearers of the different ferments by means of which they produce peculiar transformations in the fluids in which they vegetate. They transform alcohol into acetic acid, sugar of milk into lactic acid, and produce in albuminous substances decompositions called putrefaction.

From a pathological point of view the most important of these Schizomycetes is the *Bacterium Termo*, which excites and keeps up putrefaction of albuminous bodies. By the division and growth of its cells it appears under different forms, as Monas crepusculum, Leptothrix, Zoogloea, which, however, are only different stages of development of the same species. Every fungus we meet in diseases is not to be considered a parasite and the cause of the disease. We often find Aspergillus, Penicillum, Mucor, etc., in external or internal cavities, in dead tissues and stagnant secretions of the body, for instance on the tympanic membrane, on ulcerating surfaces of the lungs; but in these cases the fungi have not called forth the pathological process, though their presence favors the secondary decomposition. In other cases, however, they must be considered as the primary cause of the disease. For instance, Traube demonstrated that through a catheter, germs of Schizomycetes have been introduced into the bladder, where by their further development they produced putrid suppuration of the bladder and ureters, and abscesses in the kidneys, in which at the post-mortem movable Bacteria were found.

With regard to the infectious diseases, I shall commence with pyæmia and septicæmia, in which, quite recently, Klebs has found a vegetable organism, called by him Microsporon septicum, that must be considered as the real cause of both these diseases. Klebs, who is Professor of Pathological Anatomy, and a pupil of Virchow, elucidated the mode of propagation of this fungus, and its manner of action upon the system, and demonstrated the correctness of his assertions by very exact methods and ingenious experiments. He found the different forms of Bacterium, Leptothris, Zoogloka, belonging to the same species of Schizomycetes, in the thin and purulent secretions of wounds and granulating surfaces. Thence they penetrate into the juice-conveying canals of the connective tissue, where they excite inflammation and suppuration, and also into the marrow of the bones, producing traumatic osteomyelitis. Further, by destroying the walls of the blood-vessels they enter into the circulation, causing inflammation of the internal coat, thrombosis and embolism. They lastly excite the decomposition of the emboli, and form abscesses. The experiment made by Klebs to prove the correctness of his views is very conclusive. He takes the secretions of wounds containing numerous fungi, filters them through a porous jar, and injects hypodermically into animals the filtered fluid freed of Microsporon. No pyæmia follows, and all the animals recover; whilst the unfiltered fluid that contains the fungi invariably produces all the characteristic symptoms of pyæmia and septicæmia, and kills the animals. Klebs' experiments show further the pyrogenic effect of the fungi, and the anatomical and pathological identity of pyæmia and septicæmia.

The researches of Davaine and others have elucidated the fact that the malignant carbuncle of animals and men is produced by the penetration of vegetable organisms (Bacteria) into the circulation, causing chemical decomposition of the blood analogous to fermentation.

A fungus is also the cause of diphtheria, as proved by the observations and experiments of Buhl, Huter, Oertel, and Nassiloff. From the primarily affected locality the Schizomycetes enter into the tissues and the blood, causing decomposition of the fluids and solids of the system. The experiments on animals show conclusively that these vegetable organisms are the real bearers of the contagion.

Lately, Prof. Cohn, of Breslau,* has demonstrated that small-pox is caused by a Schizomycete, called by him Microsphæra (Kugelbacterie).

It is probable that other infectious diseases are also produced by some vegetable organisms, but they have not yet been demonstrated by exact methods. According to the researches of Tiegel,† Cohn, and others, the action of fungi depends on the products of decomposition called forth by them. Thus Bergmann and Schmiedeberg discovered in putrid wounds a specific poison, sepsin, which, being introduced into the system, calls forth the symptoms of septic fever. Tiegel thinks, therefore, that the Microsporon septicum of Klebs produces sepsin, that gives rise to the symptoms of septicæmia.

CARCINOMA.

I purpose now to bring before you another subject of great theoretical and practical interest, namely, the *structure, development and origin of carcinoma*.‡ It is only since the first researches of Virchow§ that we are enabled to distinguish with certainty the carcinoma from other malignant neoplasms. According to Virchow, with whom all pathologists now agree, the characteristic histological structure of a real cancer consists of a stroma of connective tissue, forming, as it were, alveoli, in which are embedded conglomerations of cells of an epitheloid character without intercellular tissue. Only the stroma contains blood-vessels and lymphatics; the aggregated cells of the alveoli, like all other epithelial formations, are entirely destitute of these vessels. The number and size of the blood-vessels in the stroma vary considerably. In some cancers the vessels are so numerous that they are called fungus hæmatodes. But the greater portion of tumors that formerly were thus designated are sarcomas.

In microscopical preparations, the cells contained in the alveoli have to be brushed out to allow an easier examination of the stroma. We are then able to ascertain that the alveoli are not perfectly isolated and closed cavities, but they connect with each other; so that the whole tumor can be compared to a sponge, the pores of which are filled with cancer cells. In cancers called Scirrhus we find the stroma consisting of abundant and resistant connective tissue, with few cellular elements.

* Ferdinand Cohn. Organismen in der Pockenlymphe. Virchow's Archiv, Bd. 55, p. 329.

† Tiegel. Ueber die fiebererregende Eigenschaften des Microsporon Septicum. Bern, 1871.

‡ Waldeyer die Entwickelung der Carcinome. Virchow's Archiv, Bd. XLI., p. 470, and Bd. 55, p. 67

§ R. Virchow, Zur Entwickelungsgeschichte des Krebses. Virchow's Archiv, Bd. I. p. 94.

In medullary cancers, the stroma contains a very small amount of connective tissue, and forms numerous and large alveoli, overfilled with cells. In some cases the stroma ossificates, or contains calcareous deposits, fatty, mucous tissue, or pigment, whence the different varieties of carcinoma, ossificans, petrificans, lipomatosum, myxomatosum, melanoticum. Lastly, the stroma may exhibit the structure of a sarcoma, a variety called carcinoma sarcomatosum.

The cells of carcinoma have nothing characteristic, certainly nothing specific in their microscopic appearance. They are mostly of a polymorphous shape, from their conglomeration within the alveoli, and form the so-called cancerous bodies. They do not possess a cell-membrane, and consist only of protoplasm containing a very distinct, large nucleus, and one or several nucleoli. Examined on the heated objective and in serum, the fresh cancer cells exhibit a slow motion, as observed by Waldeyer and Carmalt.* From a cut surface of a carcinoma the so-called cancer juice can be obtained; a valuable sign, as it contains only the cancer cells pressed out from the opened alveoli. The tissues surrounding the carcinoma and the single cancerous bodies are infiltrated with small amœboid cells. These are white blood-corpuscles that emigrated from the blood-vessels, a phenomenon always accompanying inflammatory action.

Carcinoma, after having reached a certain degree of development, undergoes different regressive metamorphoses, resulting in ulcerative and various destructive processes. These metamorphoses commence in the stroma, and cause the secondary fatty degeneration of the cancerous bodies. The cancer-cells sometimes undergo horny and colloid metamorphoses, whence the varieties of carcinoma keratodes and colloides. As a general rule the cancerous growths form tumors; in some exceptional cases, however, they are flat, and lead to the incurable superficial *ulcus rodens*.

In regard to the development of carcinoma I shall first mention Remak's theory. Among the numerous discoveries contained in his great work on Embryology, there is one that has since become a fundamental law of modern histology. He found that as soon as the embryonic cells are differentiated into the various germinal layers, they remain so forever. An epithelial cell, for instance, can never be transformed into connective tissue cell, and *vice versa*. We must therefore distinguish four large groups of such primitive tissues, namely, the epithelial, nervous, muscular, and connective tissues. Applying the same law to pathological productions, Remak concluded that cancerous growths, which are epithelial formations, must necessarily develop themselves from a preformed epithelium. But soon Virchow's theory became generally adopted, according to which, carcinoma, like all other new formations, develops itself from the proliferation of the cells of connective tissue. In 1865, Thiersch revived Remak's theory, but only with reference to epithelioma. The important researches of Waldeyer fully confirmed Remak's views, and contributed new and valuable facts. He demonstrated that the cancer cells possess all the characteristics of real epithelial cells. Like these, they are not connected with each other, but only juxtaposed. They do not possess intercellular substance, and never carry blood-vessels and lymphatics. Waldeyer demonstrated further the direct development of cancer cells from the proliferation of preformed epithelial cells. These latter proliferate very rapidly by division, producing irregular, atypic accumulations of cells. In this way originate the so-called cancerous bodies, which again continue to grow into the surrounding connective tissue, often through the lymphatis spaces, thus involving a whole organ into the cancerouc degeneration. The primary cancer, therefore, does not appear as a circumscribed and limited tumor, but rather as a diffused infiltration of the whole organ; a very valuable sign, on which depends the well-known immobility of real cancers. Finally, the cancer cells, through the lymphatics (discovered in carcinomas by Schroeder van der Kolk), and through the blood-vessels, are carried into distant places, producing there cancerous emboli and secondary metastatic deposits. It is probable that the spontaneous motion of the cancer cells is favorable for these metastases. The secondary cancers, unlike the primary ones, present therefore a distinct circumscribed nodule or tumor, which may continue to grow.

The result of Waldeyer's researches can thus be summed up: The cancer cells and cancer bodies of carcinoma always originate from the pre-existing real epithelium of the system, while its stroma originate from the connective tissue. We must, however, make a *strict* distinction between the real or true epithelium and the so-called endothelium lining the serous membranes and the internal surface of blood-vessels and lymphatics. The endothelium, according to His, are flattened connective-tissue corpuscles, and are therefore in no relation to the development of carcinoma.

Cancer cells, being epithelial structures, are not connected together, and this fact alone can serve as a characteristic distinction between carcinoma and sarcoma, the cells of the latter being organically connected between themselves and with the stroma.

Finally, according to Waldeyer, there exists no difference between carcinoma and epithelioma or cancroid, neither from an anatomical nor clinical point of view, and every epithelial neoplasm may become carcinomatous. I shall mention two other theories of the development of carcinoma, the one given by Koester,* according to which carcinoma develops itself from the proliferation of the endothelium of the lymphatics, and the other theory of Classen † and others who admit the development of cancer cells from the emigrated white blood-corpuscles. Both these theories have been completely refuted by the classical researches of Waldeyer.

I cannot leave this subject without touching upon a question of the highest practical importance, namely, the *origin of carcinoma*. Is such a tumor always the expression of a constitutional affection, of a dyscrasia, or diathesis? Those who, like myself, have observed the emaciated, cachectic-looking cancerous patients in hospitals, and have at the post-mortem found the identical morbid process in the different tissues and the most distant organs, will certainly be impressed by the idea of a constitutional origin of cancer. However, under the influence of Virchow's doctrines, and especially after having worked for a considerable time under the guidance of this great pathologist, I gradually came to the conviction that even malignant tumors may originate locally, and only consecutively call forth the generalization of the disease and the constitutional affection. Subsequent observations made by me in private practice fully corroborated this assumption. I possess notes of a considerable number of cases which I followed up from the first symptoms of the disease until the fatal termination. I could ascertain, beyond any doubt, that the most malignant

* Virchow's Archiv, Bd. 55, p. 481.

* Koester. Die Entwicklung der Carcinome und Sarcome. Würzburg, 1869.

† Ueber ein Cancroid der Cornea und Sclera. Virchow's Archiv, Bd. L., p 56.

tumors originated from a purely local cause in robust persons without the least hereditary disposition. This is the reason why only those organs are primarily affected by carcinoma which are the most exposed to mechanical and chemical irritations; for instance, the lips, tongue, œsophagus, stomach, rectum, uterus, breast, testicles, etc. The local cancerous affection of these organs becomes secondarily generalized through the lymphatics and the veins.

Even the so-called cachectic appearance of the patients develops itself in the latter stages of the disease. The patients affected with carcinoma may at first look very healthy. The cachectic appearance follows afterwards, in consequence of the pain, the ulcerative processes, and especially from the absorption of cancerous detritus, which act in the manner of deleterious excrementitious matter.

If carcinoma be originally a local affection, why is it not always cured by extirpation of the tumor, but, on the contrary, is usually followed by a relapse of the disease? The answer is quite simple. On examining microscopically, after the extirpation of a tumor, the neighboring so-called healthy parts, we invariably find them already involved in the cancerous degeneration. The remaining cells seem to increase their proliferating activity and thus accelerate the fatal end. The so-called relapses of cancer are therefore nothing else but a continuation of growth of the neoplasm.

THE "ARTERY CONSTRICTOR,"

WITH ADDITIONAL CASES.

By S. FLEET SPEIR, M.D.,

SURGEON TO THE BROOKLYN CITY HOSPITAL, ETC.

SINCE the cases last reported in the MEDICAL RECORD, I have had the opportunity of using the Artery Constrictor in the following cases.

Amputation of the Forearm for Disease of the Metacarpal Bones—Application of the Artery Constrictor to the Ulnar and Radial Arteries—Union by First Intention.

On the 23d of April, 1872, I amputated the forearm of a patient under the care of Dr. F. C. De Mund, with whom I had previously seen the patient in consultation. He had suffered during several months from a chronic inflammation of the metacarpal bones, accompanied by intense pain. His health and strength failed rapidly; and there being no prospect of restoring the joint to usefulness, it was deemed best to amputate, which I did by a flap operation, and applied the constrictor to the ulnar and radial arteries. The interosseous artery I endeavored to close by torsion, but the artery gave way, and I was obliged to apply a ligature; and being anxious to secure union by first intention, I selected an extremely delicate but strong silk ligature, and tied the vessel very tightly, hoping that it would not interfere with rapid union; and it seems it did not. The wound was brought together by silver wire, and bandaged. The wound united by first intention; the patient went out the day after the operation, and continued to go out every day after; calling at my office on the third day (a distance of five miles from his home). Dr. De Mund took charge of the dressing of the stump, and gives me the following particulars: "The day following the amputation of Mr. D.'s forearm I found him more comfortable than he had been for several weeks, the arm so easy that I did not disturb the dressing. The third day after the amputation I undid the bandage, but did not disturb the lint that was placed upon the stump, owing to the fact that there was little, if any, discharge. The fourth day I removed the lint, soaking it first with tepid water, and found that the parts had united by first intention with the exception of one place, where a ligature was placed, the artery being so small that you deemed it advisable to use one." In this case the delicate ligature placed upon the interosseous artery did not seem to interfere with the healing process as much as in some other cases. I have used the ligature and the artery constrictor side by side in several cases, for the purpose of determining the advantages of one over the other, when used in the same wound and under the same circumstances.

Amputation of the Forearm—Constriction of Ulnar and Radial Arteries—Union by First Intention.

Michael C——; 14 years old; Ireland; admitted September 12th, 1872, to the Brooklyn City Hospital, with a badly lacerated wound of the hand, and compound dislocation of the wrist-joint; soft parts of the lower portion of the forearm much contused. I performed amputation in the middle third of the forearm. The radial and ulnar arteries were closed by the artery constrictor, and the interosseous artery ligated with the ordinary silk ligature. The patient did very well after the operation, in spite of a strong tendency to "mania a potu," which was controlled by hydrate of chloral. There was some venous oozing, eight hours after the operation, from a large superficial vein which had bled obstinately during the operation. This was readily checked by a firm bandage. The wound healed by the first intention, except at one point, there being a slight discharge at the point of exit of the ligature. Ligature and sutures removed on the thirteenth day.

This history and the following are furnished by Dr. Gillett, resident surgeon of the Hospital.

Amputation of the Arm—High Bifurcation of the Brachial Artery—Artery Constrictor applied to the Larger Artery, and a Ligature to the Smaller Artery.

Fred. B——, aged 26; England; tinsmith; admitted September 16th, 1872, to the Brooklyn City Hospital, with compound fracture of the ulna and radius, and with extensive laceration of the forearm and arm. I amputated the arm twenty-four hours after admission. The bifurcation of the radial and ulnar arteries was high up in the middle arm. I applied the artery constrictor to the larger branch of the brachial, and a ligature to the other, which was smaller. There was some contusion at the point of amputation, and some swelling and inflammation of the arm followed for three or four days after amputation. Notwithstanding this, the wound healed kindly, uniting firmly without discharge from the side on which the constrictor was used, but presenting a continual discharge from the point of exit of the silk ligature. This ligature remained very firm until the twenty-first day, when it was removed, leaving a sinus from which there was a slight discharge for several days longer. The patient left the hospital at the end of the third week.

Constriction of Femoral and Profunda Arteries—Chronic Synovitis of three years' standing—Amputation in Upper Third of Thigh—Service of Dr. S. Fleet Speir, Brooklyn City Hospital.

Mark O'Malley, aged 23, Ireland, seaman, admitted January 24th, 1872. Patient fell down a flight of steps, striking his knee violently upon the sidewalk, from which time he has been troubled with pain in

the knee, which has continually increased in severity. The injury was received just before embarking on a voyage to China, and while in port, and during his voyage home he was confined to his berth for nearly five months. When admitted to this hospital he was very much exhausted, having been obliged by the pain to sleep in a sitting posture for nearly a month. Extension, by means of adhesive strips and pulleys, with weights attached, was applied, and the patient put upon tonics, and a hypodermic injection of morphia at night. He slowly improved up to the first of May, when a large abscess formed, which was opened by valvular incision. After this there was a continual discharge from the knee-joint, up to the time of the operation, October 5th, 1872.

A consultation of the visiting surgeons being called, it was decided that, as the disease appeared to be progressively attacking the bone, higher amputation should be performed.

The leg was amputated in the upper third of the thigh, by Dr. Speir. The bone was somewhat softened, and there was a good deal of hemorrhage from the nutrient artery, which was enlarged. The femoral and profunda arteries were tied by the constrictor, and the edges of the wound brought together by silver-wire sutures. On the fifth day some hemorrhage supervened, on the removal of a firm clot, which seemed to have been formed by oozing from the nutrient artery, and which was permitted by the looseness of the dressing. A firm bandage was applied; the hemorrhage was checked, but for several days there was a bad discharge, sanious in character, having the appearance of the breaking down of a clot. The patient has had a pulse ranging from 120 to 140 ever since the operation; has had repeated hemorrhages from the nose, but withal feels much stronger and better than before the operation.

October 29th.—The wound is nearly healed; no discharge. The sutures were removed on the 20th.

The above is the history as handed me by Dr. Gillett, the resident surgeon. I may add that in this case the femoral vein bled very profusely during the operation, and that I applied the constrictor to it with the same effect as upon the arteries. The nutrient artery was very large, and sent out a large jet of blood. Pressure only partly controlled it, and there was still some oozing from it when the wound was closed, but it was hoped that pressure on the stump would stop it, and I preferred to trust to this rather than keep the patient longer under the anæsthetic. There was a third artery of some size, which was closed by the use of the constrictor, but in a different method from that used on the others, viz.: I constricted this vessel until I was satisfied I had cut the internal and middle coats; and then, while the artery was still in the grasp of the tongue of the constrictor, I applied the torsion forceps to it and gave it several turns, in this way producing the invagination of the internal and middle coats, which, in the ordinary application of the instrument, the constrictor does of itself. I mention this as a method of effecting torsion with a certainty of dividing the inner coats at the exact point desired, with no risk of splitting them higher up than might be wished. It may be found of service to those who are partial to torsion.

Success in the application of the constrictor depends upon the invagination of the internal and middle coats of the artery. It is not enough to simply divide these coats; they must be thoroughly invaginated, and a constrictor which does not divide and thoroughly invaginate the internal and middle coats (tried upon a dead artery), should be returned to the instrument-maker as imperfect. The outer coat should be left uninjured. This last is not so important in amputations as for cases of aneurism, for if the invagination be complete, success is certain. The test of a good instrument, then, is its power to invaginate the internal and middle coats without injuring the external coat of the artery. I hope that any one desiring to make use of the constrictor will apply this test on a dead artery, and become familiar with its operation, before applying it to the living vessel, and thus make sure the instrument is a perfect one.

Temporal Artery closed by the Artery Constrictor.

Peter K——, aged 20; January 8th, 1872. Came to the "Brooklyn Tumor and Cancer Infirmary," with an encysted tumor of five years' standing, situated in the temporal region, covering over and involving the temporal artery. The tumor was at first supposed to be a simple encysted tumor, but on examination with the microscope it proved to be malignant. In the operation for removal I found the temporal artery so embedded in the tumor that it had to be severed. The artery constrictor was applied to it, and the operation terminated with but little loss of blood. The wound healed by granulation.

Amputation of Breast for Cancer, with Application of Constrictor.

Mrs. E. P——, aged 63; admitted June 24th, 1871, to the "Brooklyn Tumor and Cancer Infirmary," with extensive cancer of the right breast. The tumor began about three years ago, after a blow upon the breast. At first it was very small, but has been growing slowly until it has involved nearly the whole gland, and is very large, with a great deal of heat and pain, a bluish discoloration, and with a tendency to ulcerate at one point; nipple retracted, gland in axilla indurated and painful. Local and constitutional treatment was given her, but the pain continuing, and the disease progressing steadily, she returned to the Infirmary January 10th, 1872, to have the breast amputated. The breast was very large, and I found the vessels exposed in the operation correspondingly large. They were all closed by the artery constrictor, and the wound brought together by silver-wire sutures, and union by first intention occurred along the whole track of the wound, with the exception of one small point where a superficial abscess formed, and this healed by granulation.

I have used the constrictor in several other cases of amputation of the breast, two of which united by first intention; but it is not worth while to multiply cases in which the vessels can be so easily closed by torsion, or even pressure alone, when they are small.

Constriction of the Right Primitive Carotid for Aneurism at its Root (Brasdor's operation), performed by Dr. James B. Bell, *of Maine.*

December 29th, 1871, Dr. J. B. Bell, of Augusta, Maine, wrote me that a few weeks previously he had constricted the right primitive carotid artery of a lady, for aneurism at its root (Brasdor's operation). He says: "The operation was entirely successful, healing by first intention, although ten days afterwards there was, for two days, a little discharge of pus.

"I applied it (the artery constrictor) fifteen minutes, screwing it up until very considerable resistance was felt. This reduced the artery to a mere packing-thread. In this case the temporal artery did not lose its pulse at any time, and the next day there was pulsation in

the carotid above the wound, all, as I believe, through the basilar arteries, and perhaps the thyroid."

November 16th, 1872. Dr. Bell writes me that the case is still doing well. It appears to me that fifteen minutes was a longer time than necessary to leave the constrictor on the artery, and it is interesting to see that after so long an application there was union by first intention, showing that the external coat must have been left uninjured.

GLAUCOMATOUS INFLAMMATION OF THE FELLOW EYE,

RESULTING FROM

THE LINEAR EXTRACTION OF A TRAUMATIC CATARACT; EARLY IRIDECTOMY; CURE.

By O. D. POMEROY, M.D.,

NEW YORK.

Mrs. P., aged 40, on the 25th of September, 1871, was attempting to remove a carpet-nail from a stairway, when it suddenly flew out, and striking the left cornea, penetrated it, wounding the lens; the latter at once absorbed aqueous humor and swelled to a considerable size, with flakes of lens matter detached and falling into the anterior chamber, as is the case in a somewhat violent needle operation. I saw the patient four days after the injury (she being attended throughout by the family physician).

There had been considerable pain, and atropine had been used by the physician, with partial relief. Ordered warm water to bathe the eye, and the atropine to be continued. The case remained reasonably quiescent for about three weeks, when, noticing some symptoms of tension of the globe, I performed paracentesis, but on the next morning the tension was the same as at first, with increased pain. Three days after this date, feeling satisfied that this line of treatment was inefficient, I extracted the lens piecemeal through a linear wound made by a narrow Graefe's knife. It was removed pretty cleanly by pressure alone, without difficulty or undue violence, and a retentive bandage applied over both eyes. On each subsequent day until recovery, the lids were opened and atropine instilled.

On the fourth day after the operation, the right, or well eye, was uncovered, and the patient exclaimed that she could not see well; that the sight was clouded. I examined and found a dilated pupil, and, with the ophthalmoscope, discovered opacities in the vitreous humor, with vision about ½. Naturally I was somewhat surprised, as the patient had made no complaint of pain, or anything more than the uncomfortableness which a bandage might produce.

The tension was only slightly increased; there was some ciliary and conjunctival injection. Although the time was evening, iridectomy was at once done by the aid of gas, a kerosene lamp, and the forehead mirror. The next day the vision was as before; and there moderate reaction from the operation had taken place.

On the subsequent day the sight was reduced to the ability to counting fingers at ten feet ($=\frac{1}{100}$ nearly): the result of a hemorrhage from the iris. In two or three days this was nearly absorbed, when another hemorrhage occurred, somewhat smaller in quantity than the first, which, in its turn, was absorbed in about eight days. Since this period vision has gradually improved to about ⅓ (*i. e.*, from ½ previous to the iridectomy). The fellow eye counts fingers at one foot; a capsule in the lenticular fossa requiring removal to improve the vision. This case appears to be analogous to those cases of glaucoma in a single eye, where the operation seems to precipitate a glaucomatous attack in the fellow. The increase of tension in the injured eye might only have been symptomatic of a serous iritis—the result of the injury—or it might have been a true glaucomatous process. An accident of this kind is not of frequent occurrence, and is liable to overtake the surgeon if he neglect to fulfil all of the indications for treatment.

A TRAUMATIC CATARACT INDUCED BY A PENETRATING WOUND OF THE CORNEA, INFLICTED BY A GRANULE OF GUNPOWDER; ABSORPTION OF LENS AND RESTORATION OF VERY GOOD VISION.

A. B., aged 25, on the fourth of July, 1872, stooped down to fire a large-sized toy cannon, which was placed on the sidewalk. On exploding, some granules of gunpowder struck his right eye, quite filling the cornea and surrounding sclera.

I saw the patient about the second day of the injury, when the following state of things existed: Cornea and surrounding conjunctiva almost filled with grains of very coarse powder; iris attached to a cataractous lens, which was rapidly swelling; tension of eyeball not much increased; considerable pain. I at once placed the patient under ether, and proceeded to remove the granules of powder by means of a large-sized needle. About twenty granules of powder were removed from the cornea and conjunctiva. One granule more deeply embedded caused a perforation of the cornea, with obliteration of the anterior chamber, which, however, was only temporary. The retentive bandage and atropine were applied, and the pain at once lessened, until within a day or two it ceased to exist. The lens, however, swelled so as completely to fill the anterior chamber, and seemed on the point of jeopardizing the eye; but as there was very little pain, with only a moderate increase of tension, it did not seem necessary to remove lens matter, as it certainly would absorb, provided the health of the eyeball remained.

About October 1, 1872, the lens was mostly absorbed; with a cornea partly covered with punctate cicatrices. The patient counts fingers without a correcting lens, at eight feet. No further operative interference will be necessary.

There is one interesting point about this case: Where is the granule of gunpowder which penetrated the lens and produced the cataract? I infer that it is still in the region formerly occupied by the lens, and probably encapsulated in a mass of inflammatory material, unabsorbed lens matter, capsule, etc., and is, perhaps, in a state not likely to affect the eye. The rule, as is generally enough known, is, that a foreign body lodged within the eye sooner or later produces destruction of the organ by inflammation. But occasional exceptions occur, in which the foreign body has lodged in the lens and remained many years without inflicting mischief. I do not call to mind a case where a cataract has resulted from the penetrating wound, the result of a granule of gunpowder, except a single one occurring at the Manhattan Eye and Ear Hospital during the past year, the particulars of which I am unacquainted with.

The principal cause of the bad vision is the state of the cornea, the dioptric media being otherwise free from obstructions.

The optic nerve and retina are healthy.

A CASE OF TRAUMATIC CATARACT, WHERE THE LENS WAS EXTRUDED THROUGH AN OPENING IN THE CORNEA, ONE LINE IN DIAMETER, BY THE AID OF A NO. 2 BOWMAN'S PROBE, AND PRESSURE.

Mr. Hurley, aged 30, on September 1st, 1872, applied to me for an injury of the eye from a splinter which had penetrated the cornea near its superior portion, entered the lens, and produced a cataract.

There was little pain, and the usual treatment was instituted for about one week, when, the anterior chamber becoming filled with lens matter, the ciliary injection become more aggravated and the tension of the eyeball, which before was nearly normal, was now markedly increased, together with some pain; besides, the fellow eye was growing slightly irritable, with a disinclination to use the muscle of accommodation, when I determined to perform in some manner extraction of the lens. It was not convenient to use an anæsthetic; and as no assistant was by, I thought of reducing the operation to its minimum of pain and trouble. I therefore introduced Noyes' modification of Graefe's extraction knife, far enough to make a wound *one line* in diameter. Naturally enough, a little aqueous fluid escaped, but not a particle of lens matter. I then introduced a No. 2 Bowman's probe, moving the masses of lens matter towards the central stream of exit from the eye (which had been inaugurated by the separation of the lips of the wound by the probe), and by a continuation of the manœuvre, and pressure upon the eyeball by the finger, I succeeded in extracting the whole of the lens matter from the eye. It occurred to me that this operation was analogous to the procedure used in evacuating pus through a small opening by means of a probe, which is sometimes done when objections exist to free incisions.

The reaction from this operation was very moderate, there being no pain; and within two or three days a subsidence of the circum-corneal injection resulted. There is still a capsule in the lenticular fossa, requiring an operation.

The use of the probe in this manner was suggested by the directions given by Sodburg Wells in paracentesis of the cornea; which is to introduce a probe and thereby separate the lips of the wound to facilitate discharge of aqueous fluid.

It might be urged that a probe introduced into the eye added to the irritation more than the smallness of the corneal wound detracted from it; it is possible this may be so, although a probe passed into the anterior chamber of the eye is comparatively harmless.

Since writing the above the patient has returned, and now (Nov. 1st, 1872), after about two months, the capsule has been so far absorbed as to permit of $\frac{1}{10}$ vision, with a central movable pupil. I have no doubt but that vision will become normal without further operation.

Progress of Medical Science.

CARBOLIC ACID AND THE CARBOLATES IN PRURIGO AND PRURITUS.—In the treatment of these most obstinate affections, Von Rothmund, of Munich, believes carbolic acid to be the most efficient remedy. He recommends the internal use of about four grains a day in divided doses. If, however, the odor be objectionable, he would substitute the carbolate of soda. He has also had great success from hypodermic injections at the seat of irritation. In these cases more benefit seems to be derived from weak solutions of pure carbolic acid than from the carbolates. The formula he employs is:—

℞ Acidi carboli., gr. iv—vj.
Aquæ destillat., ℥ i.
M.

He has never observed pain following this latter method of treatment, nor has there been any subsequent inflammatory action.—*Bayer, Int. Blatt*, 1872.

TREATMENT OF DIPHTHERIA.—Dr. Goering, of Sobernheim, relates a case of diphtheria which was unrelieved by cauterizations, emetics, and vesicants, but showed marked improvement after the inhalation of bromine and bromide of potash. He employed these two remedies in the strength of one part each to one hundred and fifty parts of water. He further painted the throat occasionally with the same solution, and gave bromide of potash internally. At first the inhalations were repeated every half hour, though they seemed to produce suffocative attacks. In a few hours, however, the distressing dyspnœa was permanently relieved, and the patient subsequently made a rapid recovery.—*Memorabilien*, 10, 1872.

TREATMENT OF UMBILICAL HERNIA.—A novel method for the relief of strangulated umbilical hernia is described by Froumüller in his Notes of Hospital Practice. A patient who was under treatment for some lung disorder, took an active purgative. The medicine acted violently, and during the act of defecation an old umbilical hernia came down. Shortly after, nausea, vomiting, and enteritis set in. As he was extremely unwilling to allow any attempts towards reposition to be made on the part of his attending surgeon, he begged permission to try a plan of his own; leave was given him, and he succeeded admirably by the following procedure: Taking an ordinary cupping-glass of pretty large size, he exhausted the air and then applied it over the umbilicus. The tumor immediately rose into the glass, while the strangulated intestinal loop was left free and slipped back into the abdominal cavity.—*Memorabilien*, October, 1872.

DETECTION OF ARSENIC IN ANILINE RED.—Recent examination has been made to discover the particular coloring matter used in the fabrication of the so-called fruit syrups. A case of poisoning from eating large quantities of highly-colored candies coming under the observation of the authorities at Carlsruhe, led to the investigation of the syrups used by the soda-water venders, and especial attention was given to raspberry syrup, which is most extensively used. It was found that in every case the color was due to aniline red; and as it is known that large quantities of arsenic are used in its manufacture, the usual tests for that mineral were employed, and it was found to be present in every instance.

Dr. Meyer gives the following ready method for the detection of the artificial coloring matter used, and the arsenic which it contains:

"When merely a trace of aniline is present nitric acid immediately destroys the color, while it produces no change in the color of genuine syrups. Caustic ammonia also deprives aniline of its color, while carmine is unaffected. To detect arsenic in a suspected fluid, pour a small portion into a vial, add a little muriatic acid, and then throw in a small piece of zinc that is known to contain no arsenic. Then take a narrow strip of paper, saturate it in a solution of nitrate of silver, and attach it to the bottom of the cork. If arsenic be present arseniuretted hydrogen will be evolved and the silver acid be reduced, leaving the paper blackened."—*Memorabilien*, 1872.

Removal of Both Ovaries.—Robert Battey, M.D., of Rome, Ga. (*Rich. & Louis. Med. Jour.*, October, 1872), writes to Dr. Paul F. Eve, of Nashville, Tenn., that he has been bold enough, for certain reasons, to remove both ovaries from a patient, just as she was on the eve of her menstrual crisis, and has been privileged in the opportunity of holding between his fingers, and exhibiting to others, *the living human ovary in the very act of its most vital function, ovulation.* This he believes to be unique in the annals of surgery and physiology. He has succeeded most completely in his expectation of arresting at once the menstrual violence, and thus warding off an attack, which, in his judgment, would have caused her as much suffering and peril for life as would and has the operative procedure to which he subjected her.

Puerile Incontinence of Urine.—F. A. Stanford, M.D., of Muscogee County, Ga. (*Trans. Ga. Med. Association*, 1872), mentions the case of a boy, aged 14 years, with obstinate incontinence of urine, who was relieved by the introduction of a conical steel bougie. Since treating the above case, he has had an opportunity of testing the practice in four other cases of boys from the ages of four years up to nine, with the like result. He has not yet had an opportunity of testing this course in a female, but sees no reason why it should not be equally efficacious.

Muriated Tincture of Iron as a Styptic.—Prof. W. F. Westmoreland, M.D., of Atlanta, Ga. (*Trans. Ga. Med. Association*, 1872), recommends this preparation of iron as a styptic in secondary hemorrhages, the result of some constitutional or local defect, or in the ulceration or sloughing process, as in some forms of abscess and phagedenic degeneration of tissues. Cases are related confirming his views. In addition to the prompt arrest of hemorrhage under such circumstances, there are but few better applications to the diseased or relaxed tissue, as his experience has demonstrated the fact that in the majority of such cases the application of the styptic is followed by healthy granulations.

Purulent Aural Catarrh.—George C. Harlan, M.D., Surgeon to Wills Ophthalmic Hospital, Philadelphia (*Philadelphia Med. Times*, Nov. 16, 1872), relates a fatal case of purulent aural catarrh, occurring in a strumous girl, 22 years old, who had been subject since early childhood to occasional attacks of pain in the left ear, with slight discharge. The points of interest in the case were as follows: 1. It adds one more to the many recorded warnings against neglecting "a slight discharge from the ear." 2. The subject has an important bearing upon life insurance; and some English companies decline to consider the case of an applicant who has a chronic discharge from the ear. 3. The ophthalmoscopic examination affords an illustration of the great value of this means of diagnosis in cerebral disease. It is not yet so general, in this country at least, as it should be.

Hæmatoma of the Ear.—William Keller, M.D., Philadelphia (*Philadelphia Med. Times*, Nov. 16, 1872), in giving an explanation of the origin of hæmatoma of the ear (hæmatoma auriculæ, othæmatoma of authors), a tumor which grows from the inner side of the concha auriculæ, fluctuating to the touch, and containing fluid blood—relates the theory of Brown-Séquard, given in his recent lecture on diseases of the brain. According to this physiologist, the extravasation of the blood in the concha of the ear is caused by a lesion of the left posterior part of the brain, which may be produced in animals artificially by attacking this part of the organ. He thinks this will explain, in a reasonable and conclusive manner, a symptom whose real cause is so little known.

Vaginal Dilator.—Dr. Cutter, of Boston, Mass. (*Jour. Gynæcological Society*, Oct., 1872), at a recent meeting of the Gynæcological Society of Boston, exhibited a new form of vaginal dilator, which he had first employed in the following case, to which he had been called by Dr. Harlow, of Woburn: It was one of complete atresia vaginæ in a girl of fourteen. Five years before she had had an attack of diphtheria, and from this he was inclined to suppose the present disease had originated, by the false membrane becoming organized. Dr. Harlow had forced a small opening with a pocket-probe, with the discharge, of fetid pus. Fearing to occasion septicæmia, he did no more at the time, but applied to Dr. Cutter for a dilator. He was advised to use the one exhibited, which had been contrived for the larnyx. It was found to answer well. Washes of carbolic acid were employed, and the menses subsequently appeared for the first time.

Double Vagina and Uterus.—D. M. Edgerly, M.D., of West Newton, Mass. (*Bost. Med. and Surg. Jour.*), publishes a case of double vagina and uterus, occurring in an Irishwoman, 35 years of age, who had been delivered of her first child. On the right side he found a vagina of ordinary size, and a uterus rather larger than normal, involution not being yet completed. On the left side was a small vagina, not large enough to admit a medium-sized glass speculum, also the cervix of a rudimentary uterus; the body of the second uterus could be felt resting on the cervix of the one which had been impregnated.

Early Menstruation.—At a meeting of the Middlesex, East District, Medical Society, held at Lexington, Mass., Dr. Holmes (*Bost. Med. and Surg. Jour.*), mentioned the recent case of a birth of a child, in whom the "show" commenced on the fifth day after birth, continuing at the rate of two teaspoonfuls per day for two days, ceasing on the third. There were no abnormal appearances about the vulva or other parts of the child. Dr. Jordan, of South Reading, reported a similar case. Dr. Chapin reported the existence of a case of persistent menstruation at the age of one year.

Dysphonia and Aphonia.—Thos. F. Rumbold, M.D., of St. Louis, Mo. (*Med. Archives, October*, 1872), publishes eleven cases of these affections, with improvement, in the majority of them, after a systematic application of sprays thrown into the naso-pharyngeal space in connection with the induction current applied daily to the vocal cords by the Mackenzie throat-electrode. In the case of a lawyer, aged 43 years, with extreme hardness (occasioned by the utmost straining of the voice, while engaged in an exciting fox-hunt), attended with hyperæmia of the vocal cords, the pharynx and larynx were sprayed with about a drachm of the following mixture, recommended by Dr. O. F. Potter, of St. Louis: ℞ Tinct. muriate of iron, muriatic acid, āā f ʒ ij.; chlorate of potassa, ʒ ij.; simple syrup, water, āā ℥ ij. Only two applications were made, which completed the treatment, the voice soon returning; all appearance of hyperæmia having disappeared from the vocal cords.

The induction current in these cases was applied externally—the negative pole on the back of the neck, the positive on the vocal cords or on the pomum Adami. The strength of each application was always graduated according to the sensibility of the part

treated, always causing contraction of the muscles, but never producing much pain.

Replacement and Reunion of Portion of a Finger.—Edward L. H. Barry, M.D., Jerseyville, Ill. (*Med. Archives*, October, 1872), reports a case of reunion of a portion of a finger, which had been replaced a half-hour after its accidental amputation. The patient accidentally amputated a portion of the index finger of the left hand. The line of amputation was from a point an inch and a half from the end of the finger on its inner or proximate side, involving the joint. The piece of finger was finally found half an hour after the accident amongst some chips near the wood-block upon which he had separated it. Although this time had elapsed, an effort was made to secure reunion of the amputated part. It was thoroughly warmed by placing it in a bowl of moderately hot water, and having carefully cleansed the stump, he placed the parts in accurate apposition, and secured them thus by adhesive strips and careful bandaging, and then enveloped the whole hand in warm flannel, with directions to sustain the temperature by constant warmth, which was effected by placing his bed near the stove, and his hand on a piece of wood in the oven, the temperature of which, for two days and nights, was carefully regulated by an attendant.

On the fourth day suppuration commenced, when warm poultices were applied and continued for four weeks, using as a wash a weak solution of carbolic acid before applying the poultices. Not an unfavorable symptom presented. With the process of healing, sensibility was gradually restored; and in about two months from the occurrence of the accident there was complete reunion.

At the date of publication, the patient informed him that sensation in the part was perfect, but there was no voluntary motion. He could move the joint, however, by using the fingers of the other hand, but could not bend it otherwise.

Rheumatic Iritis with Polycoria.—F. D. Cunningham, M.D., of Richmond, Va. (*Virg. Clin. Record*, July, 1872), mentions an unusual case of this particular form of anomaly; he does not find a similar case recorded in the annual reports of several of the ophthalmic institutions. The patient, a colored male, was 26 years old, and presented a congenital anomaly in the form of a double pupil of the right eye.

Foreign Bodies in the Œsophagus.—Dr. Guersant, in a series of papers "On Surgical Diseases of Infants," etc., now being published in *The Medical News and Library*, lays down the following treatment for the extraction of foreign bodies in the œsophagus: There are cases in which extraction can be made by means of polypus, or cranesbill forceps. As a general thing, these means are very useful in extracting bones in the pharynx or in the upper part of the œsophagus. Generally, after having explored at first with the eyes, then with the finger or with the œsophageal sound, the indication is to perform certain extractions with the œsophageal forceps. When the foreign body is appreciable to the touch in the cervical region, the surgeon should hold the portion of the neck in which the substance is felt with the fingers of the left hand, which support it and prevent it thus from being pushed forwards with the forceps, which is directed with the right hand. When a hook has been swallowed, the extraction should be made thus: A steel ball is pierced at its centre, through which the thread is passed which holds the hook, and the ball is made to slide over the thread; then using a reed, the knots of which are perforated, this last is conducted by means of the thread as far as the ball. By drawing gently on the reed, the hook may be detached, and in drawing on the thread the ball, hook, and the reed may come up. The double-ring hook of Graefe is very effective, and has done good service to Dupuytren, Blondin, Bérard, and others, chiefly for the removal of pieces of money. A sponge fastened on a whalebone, which may be introduced without being moistened between the walls of the œsophagus and the foreign body, is very useful. The sponge is left several minutes beneath the foreign body to be extracted; it thus increases in volume, and when withdrawn the foreign body is brought away with it. When those various means of extraction fail, methods of pushing the foreign body into the stomach should be resorted to. As a last resort, perform œsophagotomy or tracheotomy.

Dislocation of the Ulna.—A case of dislocation of the lower end of the ulna forwards is reported by John H. Gilman, M.D., Harv., Lowell, Mass. (*Boston Medical and Surgical Journal*, October 31, 1872). It occurred while the patient was engaged in fixing a loom in the boot-mill of that city. The left forearm, being between the spokes of a wheel when the loom was set in motion, was violently turned outwards. On examination, the hand was found in a state of fixed supination; on looking at the back of the wrist, there was a marked depression of the ulnar portion, and an unusual prominence of the corresponding portion on the frontal aspect of the wrist. Reduction was effected by grasping the hand and making extension (counter-extension being made at the elbow), slightly pronating the hand and raising the bone into place with the right hand.

Reading Medical Works by Non-Professional People Dangerous.—Dr. Fordyce Barker, of New York (*N. Y. Med. Jour.*, Nov., 1872), in his paper on "Puerperal Mania," mentions, in speaking of *exciting causes*, a curious fact that had occurred in his experience. Since 1855 he has seen thirteen cases of puerperal mania in the wives of physicians, nine in New York city, and four in the adjoining cities. All but one were primiparæ. It seemed very extraordinary to him that so large a number should have occurred in one special class, and he thinks this is the probable explanation: All of these were ladies of education and more than usual quickness of intellect; and, beginning a new experience in life, and having access to their husbands' books, they had probably read just enough on midwifery to fill their minds with apprehensions as to the horrors which might be in store for them, and thus developed the cerebral disturbances, just as any other moral emotions may.

Puncture of the Bladder.—Dr. James L. Little, of New York (*N. Y. Med. Jour.*, Nov. 1872), records a case of puncture of the bladder by Dieulafoy's aspirator, with a description of the instrument. He suggests that, in using this instrument for puncture of the bladder, the following rules should be observed: 1st. The patient should lie on his back, and, if the bladder is not much distended, the operation will be facilitated by slightly elevating the patient's hips by means of a pillow placed beneath them. 2d. The punctures should be made on or near the median line, from one inch to one inch and a half above the pubes, and should be made each time in a different place. In the case described, the punctures were about a line apart, and extended over an area about half an inch in diam-

cter. Mr. Watchet recommends the No. 2 capillary trocar; but in cases where cystitis exists, and the urine is loaded with pus, mucus, or the phosphates, one of the larger trocars may be used with safety. 3d. The bladder may, when necessary, be washed out, by filling the cylinder with water from the basin, and reversing the action of the instrument, without withdrawing the trocar from the bladder.

Lime for Poisoning by Plants and Insects.—According to the *Boston Journal of Chemistry*, a standing antidote for poison by oak, ivy, etc., is to take a handful of quick-lime, dissolve in water, let it stand half an hour, then paint the poisoned parts with it. Three or four applications cure the most aggravated cases. Poison from bees, hornets, spider-bites, etc., is instantly arrested by the application of equal parts of common salt and bicarbonate of soda, well rubbed in on the place bitten or stung.

Bronchocele.—Dr. Fenwick, of Montreal (*Canada Medical Record*), read a lengthy paper on "Bronchocele," at the last meeting of the Medico Chirurgical Society of Montreal, and then detailed the case of a healthy girl aged twenty-one years, with an enormous fibro-cystic tumor of the neck, consisting of four lobes, two large lobes on the left side, one in the centre or isthmus, and one very large lobe on the right side, measuring seventeen inches in circumference; there was much pulsation through the mass, the veins being very large, and the whole was raised by the larynx in the act of swallowing. The whole was successfully removed, after the plan recommended by Prof. Green, of Portland, Maine. There was fearful hemorrhage, but the results of the operation were very satisfactory.

Nursing Sore Mouth.—In answer to a communication of Aug. Rhoads, M.D., of Papinville, Missouri, on this subject, Dr. N. S. Davis, of Chicago, Illinois (*Medical Examiner*), regards the affection as arising essentially from a deficiency of phosphatic salts in the blood. The woman, in furnishing from the blood the material necessary for the nutrition and growth of herself and child, does not assimilate these salts fast enough to supply the demand. The indication for treatment is chiefly to supply this deficiency; and no *tonics*, merely as such, which do not contain these salts as prominent constituents, will do any permanent good. As soon as the patient begins to feel the scalding and tender sensations in the edges of the tongue and mouth, she should be required to take regularly a fluid drachm of the compound syrup of the hypophosphites at each meal-time. In many instances it will be found necessary to keep up the supply of medicine during the whole period of nursing.

There are other prescriptions which will answer a similar purpose. One of the best is the mixture of extract of malt two parts, and compound syrup of hypophosphites one part, given in doses of a small tablespoonful at each meal. If the disease is neglected, or treated with ordinary tonics or stimulants, or both, until the mucous membrane of the mouth, fauces, stomach, etc., is already extensively ulcerated, and the blood of the patient extremely impoverished, no treatment may supersede the necessity for weaning the child.

Agoraphobia.—S. G. Webber, M.D., Harv. (*Boston Medical and Surgical Journal*), contributes a case of agoraphobia, having a partial resemblance of symptoms between it and the cases related by Prof. C. Westphal in the *Archiv für Psychiatrie und Nervenkrankheiten*, III., 1. He also alludes to a case reported in the *Cin. Clinic*, vol. 2d, No. 6, 1872. The peculiar symptom that the patient described, inability to cross a street, has led Dr. Westphal to give the name *agoraphobia* to the affection. The latter thinks it is clearly of cerebral origin, not epileptic nor epileptoid; has as little analogy with normal psychological phenomena, and is as little to be explained by them as other pathological conditions of the feelings, affections, ideas, and impulses. He does not undertake to settle the nature of the affection or symptom, or to decide as to the peculiar lesion giving rise to it, but recommends the careful analysis of such phenomena, in order to arrive at a decision as to their nature and cause.

Sudden Death in Puerperal Cases.—S. L. Jepson, M.D., of Wheeling, W. Va. (*Am. Jour. Obstetrics*), has an extended paper on "Sudden Death in Puerperal Cases," in which he accounts as causes for a very large proportion of sudden deaths that occur during or soon after parturition, the following: syncope; shock; embolism; pre-existing heart disease; hemorrhage; and entrance of air into uterine sinuses. Of the minor causes and conditions there are: pulmonary œdema; degenerative lesion of the kidneys; valvular heart disease, with dilatation; anæmia, with dilatation of the heart; general œdema of pregnancy. Rupture of a varicocele of the ovarian vein, rupture of a hepatic abscess during labor, peritoneal fissures on the uterus, rupture of a large aneurism, severe hæmoptysis or hæmatemesis during the violent throes of the second stage of labor, laceration of the right ventricle of the heart, are given by various writers as causes.

In closing, the following rules are appended in the *treatment of cases in which air has entered the veins:* 1st. Remove clots or other obstruction at the mouth of the womb which may prevent the free exit of any pent-up air. Resort to pressure, or any other proper means that may be necessary to bring about a firm contraction of the uterus. 2d. Resort to artificial respiration, which, by keeping up the action of the heart, may lead to the propulsion of the spumous blood through the capillaries. Electrization of the phrenic nerve has also been used. 3d. Always keep the patient in the recumbent position, which promotes the flow of arterial blood to the brain. Pressure upon the abdominal aorta, or iliacs, and upon the axillary arteries, has also been recommended for this purpose. 4th. Opening the right jugular vein is also recommended by surgical writers, in the hope of directly relieving the right side of the heart of an excess of venous blood. 5th. In addition to these means, brandy, diffusible stimulants, and all the remedies usually administered in syncope, are generally appropriate.

Preventive Measures.—Deliver the patient on her back. Give a good dose of ergot as soon as the child is born. Practise Crede's method in removing the placenta. Compress the uterus after the expulsion of the placenta, as directed, until the bandage is applied. Allow no clots to collect in the uterus. Direct the patient to keep the thighs approximated.

Excision of the Hip-Joint.—D. D. Bramble, M.D., Prof. Surgery in Cin. Col. Medicine and Surgery (*Cin. Med. News*, Oct. 1872), recently performed, with good result, the operation of excision of the hip-joint, on a male aged 21, with femoral coxalgia of five years' standing. Three inches of the bone, with nearly the whole of the acetabulum, were removed.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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

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QUARANTINE ON THE SOUTHERN AND GULF COASTS.

Assistant Surgeon Harvey E. Brown, U. S. Army, has transmitted a report to Congress by the Secretary of War in compliance with the joint resolution, approved June 6, 1872, providing for a more efficient system of quarantine on the Southern and Gulf coasts. To all interested in State medicine or sanitary reform this report will be welcomed as supplying a desideratum; for the subject of quarantine is not a beaten track. A practical acquaintance with the complications and difficulties which render the present system of quarantines in many cases inefficient and impracticable, and the failure to find, after a prolonged search in numerous standard medical works and cyclopedias, English, French, and German, any definite information on the subject, satisfies the latter assertion. Even in Appleton's Cyclopedia, which claims to have articles on all subjects, the word quarantine does not occur, and in various commercial dictionaries the subject is disposed of in a few paragraphs. Mentioning the meagre literature of this subject to a military friend, some time since, he remarked, "Perhaps the subject is not considered worth writing about." However that may be, Dr. Brown, after a careful examination of facts, and as a result of his inspections, begins a very readable report by enunciating the following propositions:—

1st. That in the vast majority of epidemics, if not all, that have occurred in the United States, the germinal principle of the disease was imported from elsewhere, and was not due to local causes.

2d. That a system of quarantine can be organized which will prove effective in preventing invasions of yellow fever.

3d. That a properly organized system, so far from interfering with the interests of commerce, will prove really beneficial to the commercial prosperity of ports where established.

4th. That the present quarantines at the South, being established by either State or municipal authority, lack that uniformity which is absolutely necessary to their efficiency, are not founded on rational views of the pathology of the disease, and are generally defective in their administration, and that, consequently, a system of a different character must be adopted to attain the end desired.

5th. That yellow fever needs to be planted in a favorable soil in order to become epidemic, and that, consequently, the danger from the disease is measurably lessened in proportion as attention is paid to the local hygienic and sanitary condition of those parts of the ports or towns which, by reason of the character of the inhabitants or other causes, are usually the habitations of the earlier cases.

Without attempting to criticise these conclusions (which surely cannot claim the charm of novelty), it may be remarked with regard to the origin, the geographical march, the nature, and prophylaxis of yellow fever, that no great question of medicine and of hygiene presents by the side of well-defined certainties so many mysteries and contradictions. The relations of this malady with the combined conditions, climatic, geologic, and economic, have been the subject of numerous and persevering researches, which have only furnished doubtful and contradictory results. In an historical sketch of yellow fever Dr. Brown alludes to its eastern origin, and to the prevalence of epidemical fevers of a malignant type at Darien in 1514. In relating these facts Dr. Brown might have mentioned the earlier occurrence of yellow fever; for history informs us with certainty, that between the years 1333 and the period of the discovery of America, that disease had prevailed epidemically twenty-two times at Barcelona.*

Having little temptation to dwell on these scanty and vague archæological researches, we pass them by to arrive the quicker at the discussion of the introduction of the yellow fever into the various ports of the Atlantic and Gulf coasts. The facts here adduced incline to the side of the extra mineral source of infection. Although bitter controversies have arisen as to the local or foreign origin of yellow fever, and very able articles have been written on both sides of the question, a good case is made out. Whatever may have been the reporter's predilections, the testimony seems to be taken fairly and impartially, and is concurrently arranged. Noticeable is the insanitary condition of the towns where the yellow fever prevailed, and the great similarity of meteorological conditions observed in the Texas towns during the prevalence of this epidemic. The town of Sabine (Texas) is thus described:—"Probably Sabine will carry away the palm for being the filthiest hole in the United States. Used

* Second Representation to the Spanish Cortes. Madrid, 1822.

chiefly as a cattle-port for shipping the beeves of Eastern Texas to New Orleans, the street bordering on the river and in the vicinity of the wharf was almost ankle deep in cow manure, and never cleaned, while the houses in the vicinity are old, rickety, and the yards filled with pools of stagnant water, filthy sinks, and everything that could contaminate the air."

After a brief allusion to epidemics in foreign countries, Dr. Brown leaves the domain of ascertained facts and views his subject in another aspect,—"the mode of existence of contagious matter." He mentions the generally accepted theories of different authors, which he handles with modesty; but he has not elucidated the question, and the nature of the yellow fever poison still remains a lugubrious mystery. We are informed that the facts are indisputable as to the development of yellow fever in the filthy holds of ships, and that among the personal conditions favoring pestilential propagation, psychical depression operates more powerfully than any other predisposing cause in affording a congenial resting-place for the germs of the disease. Perhaps the personal observation of most medical men who have witnessed epidemics will confirm the truth of the latter observation, as well as the fact that the best individual hygiene during such times is calmness and serenity of mind,—moral force here being of equal importance with physical health. On the question of the effectiveness of quarantine in preventing invasions of yellow fever, we find an unqualified answer in favor of quarantine. The discussion on this point is broad; among other things the writer says:—"The *point d'appui* of the quarantine of the future is to be the disinfection of the ship and her cargo and the care of the sick, and the well will be subjected to detention only so long as to insure their safety and avoid the possibility of their infecting the place of their destination." Next follows a brief abstract of the quarantine laws now in operation in the various States. Concerning the squabbles among the quarantine authorities, and the absurdities of these laws and their defective administration, the following remark occurs:—"It needs but a glance at the foregoing abstracts to be convinced how impossible it is to maintain an effective system of quarantine based on such heterogeneous enactments." In reply to the last inquiry of the joint resolution, "What system will least interfere with the interests of commerce at said ports?" the tenor of the report is strongly in favor of the adoption and control of quarantine by the General Government; and the adoption of precautionary measures at the port of departure and the perfecting of international arrangements with friendly powers is recommended. There is one remark on the necessity of quarantine being under the control of the Government that we cannot refrain from quoting:—"If the meteorological phenomena upon which storms depend and their effect upon commerce are deemed of sufficient importance to merit the attention of a government, how much more so are the phases of a disease which renders a large portion of the coast of the United States uninhabitable during several months, which in its periodical visitations sacrifices thousands of lives, paralyzes trade, diminishes immigration, and retards the progress of some of the most important cities on the continent?" An additional reason, we are told, why action should be taken by the General Government with a view to an international quarantine is the necessity for a vigilant quarantine at the mouth of the Rio Grande, which it is at present impossible to establish, on account of the extreme aversion of the local and State authorities at Matamoros to all quarantine measures.

Throughout the report a central idea seems to have been kept in view; but the remarks as to the War Department being the safest and best director of quarantine affairs, and the weather reports affording presumptive evidence of the fidelity of the Medical Department, although prudent and judicious, will be regarded by many as entirely gratuitous.

Concluding what we have to say, and taking a general view of the whole subject of quarantine, it is manifest that the present system is not one that can be enforced with adequate security to the public service, and without unnecessary severity upon individuals, and that the administration of quarantine at the port of arrival is comparatively useless, so long as the provisions desirable at the port of embarkation and the sanitary means to be enforced during the voyage are neglected. Only by a cosmopolitan code of regulations can a proper quarantine be enforced; the question is perhaps one of the most serious difficulties of sanitary police and of international hygiene. We have had a Geneva Arbitration, why cannot diplomacy be brought into effective operation in quarantine affairs? No legislator will hesitate to admit that the best government is one that brings the greatest good to the greatest number, and no physician will acknowledge that cure is better than prevention. Comparing the relative merits of these two branches of medical knowledge with the first proposition, the inference is obvious. It is to be hoped, that the moral aid of public opinion and the material assistance of science may be the means of inducing the National Legislature to adopt some comprehensive measure, by which the confused mass of sanitary laws of the different States may be arranged and codified, the good offices of international arrangement secured, and ample opportunities afforded workers in a direction where the greatest triumphs of medical science are to be achieved.

THE MEDICAL RECORD'S NAMESAKE.

SINCE our editorial of last month, relative to the cool plagiarism of the name of this Journal by an English periodical recently begun, we have seen three numbers of said periodical, and find that not only our name, but the size and shape of page, column, and

ype, have been copied as nearly as possible by our *honorable* cousins, who have been so fond of reminding us of American shortcomings of this character heretofore. With considerable curiosity, but in vain, we have searched the three numbers referred to in hope of finding some allusion to ourselves, partly that we might learn what our own name was to be in the future. Perhaps, in our American ignorance, we have not known that our real name was "The New York Medical Record," or "The American Medical Record," or some other kind of Medical Record, and not *simply* "The Medical Record." We cannot believe, however, that the large number of eminent gentlemen whose names are printed as collaborators will countenance the discourteous plagiarism of which Mr. Earnest Hart and his publishers, Smith, Elder & Co., have been guilty, and we desire to call their attention to the subject.

THE ALTERATION OF PRESCRIPTIONS.

In another part of the Record is a communication bearing upon the subject of alteration of physicians' prescriptions by pharmacists. It will be recollected that some time ago we took occasion to ventilate the subject somewhat, founding our remarks upon some statements made in a communication by Prof. Barker of this city. The College of Pharmacy has deemed the subject of such importance, that it has taken pains to investigate the matter, and has given us the report of its committee. We are glad of the opportunity of setting the College right in the matter, and of commending its determination of punishing any convicted offenders against its Code of Ethics. The latter, in our opinion, embodies in its provisions everything calculated to entitle the institution in question to the unqualified confidence and respect of the medical profession.

Reviews and Notices of Books.

Transactions of the American Medical Association. 1872. Vol. 23.

This volume contains both good and evil. The prize essay of Dr. Percy, on *Phosphorus;* the papers of Dr. Muzzy, on *Electrolysis in Cancer;* of Dr. Richardson, of Dr. Seguin, of Dr. Knapp on *Recent Advances in the Operation for Cataract;* and the address of President Yandell, and some of the reports of committees, and other papers also, are worthy of preservation in a permanent form, and ought to be published in some widely-circulated medical journal. But between these really valuable papers is sandwiched a vast amount of trash.

The reports on the climatology of the different States are miracles of dilution. Ideas and facts that ought to be compressed in a few pages are expanded and attenuated until they become as thin as a comet's tail. And yet there is much in these reports of genuine worth; but it is so buried under mountains of words and figures that it will be lost to science and humanity.

We would make this suggestion to the managers of the American Medical Association:

First. Let the transactions be confined to the reports of committees, abridged by the committee of publication, the lists of members, minutes of the meetings, and other miscellaneous matter. A volume thus constituted would be small and compact, and valuable for reference.

Secondly. Let the papers read in the sections—if they have any value—be recommended for publication in some medical journal. Such a recommendation would be an indorsement, and would give the papers so recommended a dignity and prestige. Under the present custom, papers of decided value, as in the present volume, are but little more read than if they were shut up in one of the vaults of Greenwood.

Injuries of Nerves and their Consequences. By S. Weir Mitchell, M.D., etc. Philadelphia. 1872. pp. 377.

Those who have studied Dr. Mitchell's earlier contributions to the surgical pathology of nerves must feel grateful for the summing up of his vast experience, and for the re-statement of his opinions constituting the volume to which we desire to call attention.

The first four chapters of the book treat of general considerations touching the anatomy, normal and pathological physiology of nerves. In the chapter upon anatomy, we were somewhat surprised to find no mention of Van der Kolk's law of distribution of the sensitive and motor filaments of one nerve trunk—a law which affords great aid in the diagnosis of the seat of nerve lesions. Under the head of neuro-physiology, Dr. M. gives much space to the question of trophic nerves, and while apparently not believing Samuel's assertion of the existence of such nerves, does not frankly deny its truth. He points out the circumstances under which real alterations of nutrition (beyond mere atrophy) take place, and holds to an opinion formerly expressed by himself, that the lesion in such cases is an irritative one, and not a simple severance of nerve fibres. He does not believe that lesions of the vaso-motor system give rise to alterations of nutrition. Neither is Dr. Mitchell willing to admit that there are separate conductors for the various modes of sensibility—contact, pain, temperature, etc. While speaking of continued activity of nerves in the midst of considerable organic change in their sheaths and myeline, our author inclines to the opinion that the axis cylinder is the essential part of nerve fibres; a view certainly sustained by phenomena observed in disseminated and columnar sclerosis of the nervous centres. In the fourth chapter are tolerably full accounts of congestion of nerves (experimentally studied), acute and chronic neuritis. The fact is stated that chronic neuritis tends to advance centripetally along nerve trunks; and it is further observed, that in this disease the secondary atrophy of nerve fibres is never complete, healthy fibres being met with in nerves which to the naked eye resemble tendons. For the treatment of congested or inflamed nerves, Dr. M. recommends ice in bladders, rest, counter-irritants (secondary faradic current), and such sedatives as morphia and atropia, used hypodermically. The chapter ends with a good account of the Wallerian degeneration, and of the regeneration of nerves. A misprint makes Waller's researches date 1862, whereas the correct time of publication is 1852.

In Chapter V. incised, punctured, contused, and lacerated wounds of nerves are spoken of in detail and illustrated by cases. Dr. M. almost despairs of obtaining union in the simplest cases of division of nerves in man. Compression of nerves receives more attention, and some ingenious experiments of the author add interest to the section. In these it was found that nerve trunks (in rabbits) would bear twenty inches of mercury before losing their physiological properties; which fact, taken with the other, that an extreme weight (108–116 lbs.) is required to break the sciatic nerve in the human cadaver (p. 22), illustrates the wonderful power of resistance possessed by nerve trunks. Chapter VI. treats of the symptoms which immediately follow injuries of nerves, such as local sensations, shock, distant reflex loss of function; and Chapter VII. of the remote symptoms, tetanus and chorea being disposed of with little more than a mention, while trophic changes in parts supplied by the affected nerves—atrophy, cutaneous eruptions, glossy skin, loss of hair, alterations in the connective tissue, in joints, changes in temperature—are most thoroughly and ably detailed. Chapter VIII. is devoted in greater part to the study of various alterations of sensibility, a great deal of space being taken up with an account of the burning pain so characteristic of irritative nerve lesion, and called *causalgia* by Dr. Mitchell. A vivid portrait of the sufferer from causalgia is presented on pp. 197–8, a description the accuracy of which is corroborated by our own experience. Paralysis and spasm, consequent upon lesion of motor nerves, form the subject of interesting paragraphs. In Chapter IX., Dr. M., speaking of diagnosis and prognosis in nerve injuries, records his doubt as to our ability to diagnose the nature of the injury from the symptoms. Diagnosis between peripheral and spinal cord lesions is rightly insisted on, and Stich's plan of testing reflex action is adopted. It is but justice to state that, three years before Stich, Dr. Brown-Séquard* pointed out the value of this means. As regards prognosis, Dr. Mitchell is not sanguine of obtaining a cure after nerve section or laceration; but he adds that in the worst cases remarkable improvement occurs in the course of two or more years. Chapters X., XI., and XII. give details concerning treatment. Among the means which tend to cure muscular atrophy and paralysis, we have faradic electricity recommended as the best, together with exercise, shampooing, etc. For the relief of anæsthesia nothing has appeared so efficacious to the author as the use of the wire brush connected with the secondary faradic current, and applied to the dried skin. For the diminution of neuralgia (causalgia in particular) a variety of agents are well spoken of: counter-irritants (as extensively applied as possible), cold applications, the hypodermic use of morphia and atropia, and lastly resection of nerves above the seat of injury. This operation has often afforded relief, and occasionally has brought about a complete cure. The concluding chapters treat of wounds of special nerves (sympathetic and cranial), and of neural maladies of stumps.

This most original volume cannot but prove a storehouse of facts which can be utilized by the surgeon and the physiologist. The scientific temper of the work, the masterly descriptions of cases and of symptoms, the moderation in drawing conclusions, and the erudition exhibited, are all worthy of Dr. Mitchell's exalted reputation. We cannot close without expressing the hope that the author will be able at some future time to give us the results of his experience and researches in the more obscure field of central neural pathology.

* Brown-Séquard, "Experimental Researches applied to Physiology and Pathology." New York, 1853. p. 73.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 16th, 1873.

DR. AUSTIN FLINT, PRESIDENT, in the Chair.

ADDRESS OF RETIRING PRESIDENT.

DR. E. R. PEASLEE, the retiring President, made the following remarks:

Fellows of the New York Academy of Medicine: The moment has now arrived which relieves me of the office which your generosity gave to me two years ago, but nothing will ever deprive me of a full appreciation, and a grateful recollection of the honor thus conferred.

I entered upon my official duties with misgivings, being aware that I have no special talent in that direction. I have performed them according to my ability in the midst of other pressing duties, and not seldom—as any one else would—to the neglect of the latter; and I now relinquish them with a two-fold pleasure. In the first place, I need the time for other pressing demands; and in the second, I have the great satisfaction of seeing next in this chair, one whom I have long recognized as a friend, and who will, I know, perform its duties both efficiently and conscientiously.

I know you will extend to him the same generous support which you have accorded to me. It must always be the fact in an organization like this, that the scientific labor is performed by a comparatively small number of the members—much smaller indeed than should be the case. I have aimed to bring new laborers into the field, but there are still many others who, I hope, will no longer delay to take prominent parts, but will respond to the call to do so by my successor.

On the other hand, the members of the Academy may very much embarrass the presiding officer, though without any such intention; and I now speak from experience. The President must of course have a definite programme for at least three or four meetings of the Academy in advance; and though the Academy has the undoubted right to substitute or interpolate any other proceedings, as it may see fit, it may also sometimes by introducing a trivial matter to occupy the time, or by voting to adjourn fifteen minutes too soon, entirely break up the arrangements of the President, and embarrass him and those he had engaged to read papers, for several weeks afterwards.

For example: It must be admitted that the discussion of a paper should occur—unless it is thought necessary to wait for its publication—on the evening of and immediately after its reading. It is therefore to be assumed that it will not be postponed without a sufficient reason. But sometimes a member wishes to go home immediately after the reading, and looking at his time-keeper finds it is already late, *i. e.*, 9¼ or 10 o'clock, and therefore he moves that the discussion be deferred to the next meeting. There are several gentlemen present who are prepared to discuss the paper, but who will probably not be able to be present at the next

aeeting. But the Academy votes, almost as a matter f course, to adjourn, and the consequence is that few f any remarks are made on the paper at the next aeeting. As a matter of course also the same injustice s done, and the same discourtesy committed to the ıext reader, *i. e.*, the discussion is again deferred to the ollowing meeting, and under these circumstances actu-lly for want of time.

Now this may be avoided in two ways: *First*, if ny member wishes to go home after the paper has ·een read, he may quietly do so, without moving that nybody else shall also be sent home; or, *secondly*, the 'resident may be asked whether his arrangements for he next meetings will be interfered with by the post-ıonement, and if so the Academy may vote down the ıotion. In my own judgment the former course would e much the most beneficial to the Academy; since I ave observed that the person who moves the postpone-ıent of the discussion is almost sure not to manifest ny further interest in it, and sure to be absent when it oes come off. But if the motion be made it remains or the Academy to decide.

One illustration more. Your President has previously rranged for matter enough entirely to fill a particular vening to a late hour, in consequence of the intro-uction of some extra subject which could not be eferred; when some individual comes here without ny previous notification, with a patient he wishes to how to the Academy—the case being one of interest o himself at any rate, and to the Academy perhaps—erhaps not. The President cannot give him the ime without injustice to those already engaged, nd states this fact, and requests the gentleman o defer his case till the next meeting. The latter ıen appeals to the Academy, asking for a very ıort time only, since he does not wish to trouble is patient to come again; the Academy grants the rivilege; the gentleman takes such time as he pleases, nd the consequence again is that the principal paper deferred, and its reading ended so very late that ıe discussion must be put over to the next meeting. gain the discussion fails, therefore, and the whole rogramme is again disturbed for the three or four sub-quent meetings.

Of course a President will treat with courtesy and onsideration all the members of this cademy; but oth courtesy and consideration are due first of all to ıe reader of the paper for the evening; and no other ıember's claims or convenience should be allowed to onflict with his, or can do so without injustice to im. I trust, gentlemen, that you will pardon me for ıese remarks, since they do not demand an increase of ower for your presiding officer, but only such an mount of discretion as the best good of the Academy emands.

Turning to the President-elect, he further remarked: nd now, my friend, will you allow me to induct you o the chair to which you have been elected with such n unusual degree of unanimity. You need no special ıtroduction here. Your name, indeed, suggests a ature and constitution very hard and very unimpres-ble; but we know it is a misnomer in these respects, or though too rough a friction would certainly make ıe fire fly, we have always found you the highminded ıd sympathetic man, and the genial gentleman as ell as the finished scholar, the distinguished author, ıd the skilful practitioner.

The Academy has honored you by its preference. I now you, being such, will not fail to honor the Acad-ny in the chair to which you are now inducted; and present to you for your guidance the Constitution and y-laws of this Association.

INAUGURAL OF THE PRESIDENT-ELECT.

Dr. Austin Flint, Sr., in responding to the remarks of Dr. Peaslee, said, that as the future presiding officer, he should imitate his example, and hoped the action of the *flint* would not end in a *flash in the pan*. He then spoke as follows:

Fellows of the Academy of Medicine: A biennial election offers a fitting occasion for bringing before us the objects of our association, in order to see if anything can be done to give greater efficiency to the means for their accomplishment. These objects are expressed in the constitution thus: The cultivation of the Science of Medicine; the advancement of the character and honor of the profession; the elevation of the standard of medical education, and the promotion of the public health. First, and chiefly, the means for the accomplishment of these objects, are the communications, discourses, and discussions at the stated meetings of the Academy. These means constitute the important purpose for which the meetings are held. To endeavor to secure for the successive stated meetings able papers which, in addition to their intrinsic value, will be useful in calling forth profitable debate, is the most prominent of the duties pertaining to the office which I am to enter upon to night. It is obvious that success here must depend on the co-operation of the Fellows of the Academy. I shall enter upon my official duties with the belief that I may count upon this essential co-operation. I will add, I have had already abundant reason to anticipate that I shall not be disappointed in this respect.

It is well for us to keep constantly in mind the fact that the great purpose of our meetings relates to the accomplishment of the objects for which the Academy was instituted. All the time devoted to the deliberations on irrelevant matters, and on the needless or unduly prolonged considerations of questions which are trivial or of merely personal interest, is a deduction from the limited period which should be devoted to the great purpose of the meetings. This may seem to be a common-place truth; but when our conduct is to be regulated by common-place truths, they can hardly be kept too constantly before us.

I will venture a few remarks with respect to our debates. It is notorious that in almost all assemblages there are some who are over-ready to talk, and there are others who are over-reluctant to have their voices heard. The natural consequence is, the former talk too much, and the latter too little, if at all. It would be strange if the meetings of the Academy were entirely exceptional in this respect. A very simple rule of action, if strictly followed, will prevent redundancy of debate. It is to keep before the mind the inquiry, Have I anything to say which will promote the great purpose of the meetings, by the addition of facts, the citation of opinions for the elucidation, in any way, of the topics under discussion? A modification of this inquiry will render it alike a rule of conduct for those who either habitually abstain from speaking or speak too little. Can I say anything which will promote the great purpose of the meetings? Whenever any Fellow can answer this inquiry affirmatively, he is bound to speak. Keeping in view the objects of the Academy is here important. Our organization is not for polemical practice or display. The Academy is not a mental gymnasium, or a "Debating Society." Hence there should be but one motive in entering into the debates, namely, to contribute facts or opinions, and to eliminate the topics under discussion. It is hardly necessary to add, but the fact seems through modesty to be lost sight of by some of the Fellows, that the

duty, not to say privilege, of participating in debates belongs to the younger as well as the older of those who may be in attendance at the meetings. The importance of making preparation beforehand for engaging in debate is a point to be considered. To be able, without preliminary reflection or study, to do justice to a scientific or professional subject, one must be very familiar with it. In general, it may be said, that such a degree of familiarity can only be the result of the attention incident to authorship or oral teaching. With reference to this point, it seems to me desirable that, whenever practicable, ample previous notice should be given of the subject which will come up for discussion. The custom of submitting views in writing, whenever the previous notice is sufficient to admit of it, should, as it seems to me, be encouraged. They who have had personal experience in the matter, and all who have had their observations directed thereto, must be satisfied that the pen is a most useful instrument in restraining immature utterances, and also, in other ways, promoting accuracy, precision, and clearness in the enunciation of facts, opinions, and arguments.

In furtherance of the objects of the Academy, it is of course important that the meetings should be well attended. How is this to be secured? Undoubtedly neither by entreaty nor by scolding. It is certain that a large representation of the Fellows at successive meetings can never be effected by importuning them, severally or collectively, to come, or by reproaches for non-attendance. Nor would it be desirable, were it feasible, to obtain full meetings by such methods. If the meetings can be rendered sufficiently attractive by the papers which are presented and the discussions which follow, many Fellows will come; if otherwise, few will be present. Largely attended meetings, therefore, while they are highly desirable with reference to the objects of the Academy, are also evidence of the value of the work which is done for the accomplishment of these objects.

Another point may be touched upon in this connection. It is the desirableness of a punctual attendance at our meetings. Unless the meetings commence at the appointed hour, not only are some subjected to the annoyance of delay, but discussions are sometimes prevented or prematurely ended, owing to the lateness of the hour. The by-laws require that twenty-one resident Fellows shall be necessary to constitute a quorum. Not infrequently there is considerable loss of time in obtaining the registration of this number. Anticipating this, some are accustomed to come late in order to avoid waiting for the business of the evening. Let it be considered that if they who do this will come punctually, the probability is that the work could begin promptly at the appointed hour, and none would be exposed to the annoyance of waiting.

The publication of papers of interest and value has always been a feature of this Institution; and all must admit that important contributions to medical literature are contained in the printed bulletins and transactions which have emanated from the Academy. These publications, however, have had a very limited circulation beyond the Fellows of the Academy; and this has been a serious drawback in the way of their usefulness. A recent improvement consists in having but one publication, namely, the "Transactions," into which the "Bulletin" has been merged. I submit for consideration the inquiry whether it would not be a further improvement to issue the "Transactions" in a yearly volume. Among the contributions during a year, if those were to be selected for publication which were especially deserving of preservation, they would form a volume which could hardly fail soon to be in request by the members of the medical profession throughout this country and in other countries. Under these circumstances, to be ranked among the contributors to the volume would become an honor to be coveted; and herein would be an additional inducement to contribute elaborate and able articles. It is certainly a matter of reproach that the metropolis of our country is wanting in a serial of this description; and, with proper efforts, why should not the "Transactions of the New York Academy of Medicine," after some years, form a series of volumes of which the American Medical Profession would be justly proud? Why should we not in this respect emulate the Royal Medical and Chirurgical Society of London? Any one who has had occasion to consult the long series of volumes which have emanated from this Society cannot fail to appreciate the pertinency of citing its labors in this direction, as affording to us an example and encouragement. With all due respect to the Medical Periodical Press, were we successful in emulating this Society in the character of an annual volume of Transactions, it would not be the case, as it now is, that contributors of papers read at the meetings of the Academy care but little for their appearance in the printed "Transactions," preferring rather that they should be given to the medical public in the columns of a medical journal.

There is a matter of no little importance to which I should not fail to make reference. It is the possession of an appropriate building. This has been considered a desideratum from the organization of the Academy. The by-laws require, as one of the duties of the Trustees, that they take charge of the "Building Fund." A considerable sum for this fund is already acquired. No one can doubt that from the possession of an appropriate building many advantages would accrue—advantages not limited to the Fellows of the Academy, but enhancing the interests of the profession at large, both in New York and throughout the country. I shall content myself with this simple reference to the matter, the more because it will be entered into by those far more competent to enforce its claims on the attention of the Academy.

Finally, the Academy of Medicine is one of several organizations in this city for similar or kindred objects. Between these several organizations there should be maintained relations which involve only a spirit of honorable rivalry. It is a well established axiom that an individual never raises himself by efforts to depreciate a competitor; and this maxim is equally true as applied to associations. Not only are different organizations laboring for essentially the same objects, but, to a considerable extent, they embrace the same laborers for these objects. To my mind it reflects great credit upon the medical profession of this city, that these organizations are carried on actively without antagonism, each apparently being pervaded by the catholic spirit of our motto, *Una fides, altare commune.*

Thanking you for the honor which you have been pleased to confer on me, and believing that true gratitude is expressed better in actions than by words, I pledge my earnest efforts in behalf of the important objects of the Academy.

The following Resolutions moved by Dr. Wm. C. Roberts, and simultaneously seconded by Drs. Oliver White and Fordyce Barker, were unanimously passed, and ordered to be published in the medical journals.

Resolved, That the New York Academy of Medicine, in separating from their late President, Dr. E. R. Peaslee, upon the expiration of his term of office, beg to convey to him their high sense of his faithful, urbane,

and zealous services while in the chair; their warm appreciation of his great attainments as a classical and medical scholar, physiologist, pathologist and practitioner, and assure him of their affectionate regard, and best wishes for his future health and prosperity.

Resolved, That this resolution be entered on the minutes, to remain a lasting record of the sense of the Academy.

CAUSES AND TREATMENT OF ABORTION.

Dr. A. S. Church then read a paper on "The Causes, Treatment, and Prevention of Abortions," of which we give a full synopsis:

An abortion is understood to be the expulsion of the fœtus from the uterus before it has attained the degree of development necessary to render it viable. This period is usually fixed at about the end of the sixth month of pregnancy, although cases are reported where fœtuses born at the fifth month, and even at the fourth, have lived, but they are exceedingly rare, and there is usually the possibility of error in calculation. It is not uncommon for a fœtus to be born alive any time during the fourth month, and live for several hours, and occasionally a case occurs where life is prolonged until the third or fourth day, but well authenticated cases of viability occurring previous to the end of the sixth month are rare. An expulsion of the fœtus after the sixth month, and previous to the completion of the full term of gestation, is called a premature delivery.

Statistics of the frequency of abortions vary largely by different authors. Collins gives one in 66 births, Beatty 1 in 57, Churchill 1 in 26, La Chapelle 1 in 89, Deubel 1 in 12. During the last ten years to my obstetrical practice, careful notes have been kept, and I find about one miscarriage to 25 births recorded. Statistics of private practice only are reliable, as only those far advanced in pregnancy enter hospitals and lying-in asylums. Statistics also vary greatly in the different walks of life. About 4 cases occur among women who are engaged in hard work to one in a higher scale of society.

Abortions occur more frequently during the early months of pregnancy than at any subsequent time, and it may be laid down as a rule that the shorter the period of pregnancy the greater the liability to an abortion. The twentieth day after conception has taken place—that is about the time the menses would have returned, and at every subsequent period of four weeks, spontaneous abortions are particularly liable to occur, the danger growing less as pregnancy advances.

It is a popular opinion that a larger proportion of aborted embryos is of the male sex rather than female, and some authors coincide with that opinion. The difficulty of distinguishing the sex in early embryonic life, and the frequency with which the ovum is lost, render statistics unreliable; and public opinion in judging of the sex of an expelled embryo, although considerably advanced, is often in error, for in early embryonic life the clitoris and vulva are disproportionally large, and might easily be mistaken; the former for a penis, and the latter for a scrotum.

The general causes of abortion are as follows: 1st, Accidental; 2d, Constitutional; 3d, Diseases of the uterus and appendages; 4th, Abortions from habit.

In regard to *abortions from habit*, we meet with women who are in good health, who conceive readily, apparently have no uterine disease, who use all necessary care to preserve the ovum, and still have abortion after abortion occurring always about the same period of gestation. They come on without any apparent exciting cause, and are very properly termed abortions from habit. I am fully aware that this cause is not admitted by many whose opinions I highly respect, but careful observation for many years has convinced me that abortions from this cause solely are not infrequent.

An abortion occurring early in pregnancy either from habit or from causes destroying the ovum, other than violent, is not usually attended with much trouble. The ovum slips away with a few pains more or less, and without any more loss of blood than attends an ordinary menstrual flow, and with but little inconvenience to the patient.

Provoked abortions are usually very troublesome. The constitutional symptoms are prominent, the pains are hard, and continue for a day or two, sometimes for several days, the hemorrhage is profuse, often dangerous, the placenta is frequently retained, metritis, metro-peritonitis and death often follow. The explanation (independently of direct injuries to the patient), why this kind of abortion is attended with such unpleasant results, perhaps may be that the embryo, its attachments, and the uterus are in a perfectly healthy condition, and the uterus is not easily provoked to expel that which is in no way a foreign body, and as the embryo is not usually destroyed until it is expelled and the pains then cease, a portion of the placental attachment remains for some time, allowing a hemorrhage that is difficult to control.

A complete cessation of the movements of the fœtus, after they have been distinctly felt, absence of the beating of the fœtal heart, a cessation of the enlargement of the abdomen, or a diminished size, a feeling of coldness and weight in the hypogastrium, with flaccid breasts, indicate a dead fœtus, and signs of its expulsion may be encouraged.

The three important symptoms which demand consideration, are pain, hemorrhage, and an escape of the amniotic fluid.

When called to a patient that has symptoms of threatened abortion, our first duty is to decide whether the patient is really pregnant; second, whether the symptoms are those of abortion; and, if so, is an abortion inevitable? To settle the first point will sometimes require quite as much tact and shrewdness as medical skill. If the pains are without distinct remissions, and precede the hemorrhage, and are relieved by an increased flow, the cause probably is uterine congestion. If, on the contrary, the hemorrhage precedes the pains, and the pains gradually increase in severity, with distinct remissions, a miscarriage is imminent. If on making a digital examination the cervix is found to retain its normal length and thickness, and the ovum cannot be felt, and the liquor amnii has not escaped, no matter how great the hemorrhage, there is hope that an abortion may be prevented; but if the neck has become short and the os patulous, and if during the pain the membranes can be felt to be tense and protrude, the probability is that the ovum will escape in spite of efforts to prevent it.

The treatment should be preventive so long as there is a reasonable prospect of success. Nervous fears should be quieted, the patient directed to assume the recumbent posture, and such symptoms should be controlled as early as possible. Pains should be quieted by anodyne enemata, repeated as often as necessary. When the uterus shows a tendency to cast off the ovum at each pregnancy, owing to abnormal conditions within itself, it may become necessary to use an anodyne enema or suppository every night for two or three weeks, in the mean time giving attention to the general health of the patient, and the condition of the bowels. Hemorrhage should be controlled by astrin-

gents applied to the vagina or os uteri. A soft sponge saturated with alum water or tannin, squeezed nearly dry, and applied against the os, is far more effectual than astringents administered internally. Their internal administration seems to do but little good in arresting hemorrhage, and considerable harm in disturbing digestion and constipating the bowels. The only internal remedy that I have used with any satisfaction to arrest uterine hemorrhage is ergot. When the bleeding seems to come from a congested os or cervix, and is not profuse, and even slight disturbance of the placental attachment is suspected, from 10 to 20 drops of Squibb's Fl. Ext. of Ergot may be given three or four times a day with satisfactory results. If the patient is plethoric, has been accustomed to a pretty large menstrual flow, and is in the early month of pregnancy, the flow had better not be checked with astringents. A moderate bleeding from the arm will do more to preserve the ovum than anything else. The recumbent posture should not be insisted upon for more than two or three days. Confinement to the bed soon deranges the health, the appetite is lost, the patient becomes nervous, and I think is much more likely to abort than if she is allowed to be up and take moderate exercise. It is not necessary to enjoin perfect rest until hemorrhage is controlled. A patient can wear a sponge of the size of an egg medicated with alum, and be around the house without losing a drachm of blood a day, when several ounces would be lost without the use of this application. I always keep ready for use sponges soaked in a solution of alum, tannin, or acetate of lead, and then moderately compressed. I find them convenient both for vaginal and uterine application. Those intended for introduction within the os need to be more firmly compressed, smaller, and with the addition of a small quantity of gum acacia to prevent a too rapid expansion, and thereby consequent failure of introduction. Hemorrhage may be so alarming as to require not only the sponge, but a thorough tamponing of the vagina. This of course will be likely to cause the death of the ovum by a separation of the placental attachment, if the bleeding comes from the placenta, but there seems to be no choice in the matter, and there is the possibility that a clot may close the bleeding vessels, and the ovum be preserved. A tampon does not necessarily cause the destruction of the ovum.

The hemorrhage may not come from a separation of the placenta or any portion of it. It may come from an open vein just within the os or from an injury to the vagina, and in either case the tampon would be successful in arresting the hemorrhage without much risk to the ovum. We are not always sure, when called to a case of uterine hemorrhage, that a knitting needle intended to be introduced into the uterine cavity, may not have caused simply a vaginal wound, and the ovum has not been injured by either the instrument or the hemorrhage, and will not be by its arrest.

In the latter months of pregnancy, if it becomes necessary to tampon the vagina, the effect should be watched, for internal hemorrhage may take place and endanger the life of the patient. As hemorrhage is not usually very troublesome during the early months, and if it is decided that an abortion is inevitable, it had better be allowed to come unassisted, for the ovum may be expelled entire, while any assistance with the finger is pretty sure to rupture the membranes, allowing an escape of the fœtus, with a retention of the placenta, and a troublesome hemorrhage. An abortion after the third month is usually accompanied with a rupture of the membranes, after which the fœtus escapes readily enough, and the placenta is commonly retained for several days, if no assistance is rendered. If it can be hooked down with the finger and removed at once it is well to do so, but this is not always easily accomplished. If it is detached, it is advisable to make pretty persevering efforts to remove it, and if the finger fails, Dewees' blunt hook or a pair of placental forceps may be found very useful. No harm need be done with either. In some cases the placenta remains attached to the uterus, and immediately after the fœtus is expelled, the os closes so firmly as to render it impossible to introduce the finger except by a tiresome and painful process of dilatation. The hemorrhage ceases, and the uterus shows no disposition to expel its contents for several days. Under such circumstances it seems better to wait, than to use the force necessary to remove the placenta. I am well aware of the supposed danger of such a course. Hemorrhage may come on at a time when assistance is not easily obtained, and the life of the patient be jeopardized, or septicæmia may result from a putrid placenta. I have never seen harm from such delay, and think the danger considerably magnified. I have for the last two or three years, when I found it necessary or advisable to leave the placenta undelivered, introduced a carbolized sponge-tent into the os and tamponed the vagina, and on removing the tent a few hours after have succeeded with but little trouble in getting the placenta, or if I still found it attached, introduced another tent and waited a few hours longer, in the meantime giving a few doses of ergot. In removing the placenta either with the finger or an instrument, that has not been cast off, there is great danger that a portion will remain attached, and keep up a constant hemorrhage for days and weeks, and cause far more trouble and danger than to adopt the plan just proposed. I think there is far more danger both of hemorrhage and septicæmia from the retention of a portion than a whole placenta: in fact, so long as the placenta remains entire and attached, there is no danger from putrid absorption, for there is no decomposition. If the placenta is not expelled within twelve or eighteen hours, it will usually remain about a week, when hemorrhage will set in and the placenta will be found in the neck and can be hooked down without any trouble. Occasionally a placenta will be retained for several months without hemorrhage or any unpleasant symptom. I remember one case when it was retained for three months, and when expelled bore no evidence of decomposition. In one case recorded the placenta of a five months' fœtus was never expelled. This patient had no hemorrhage, no lochia, but was troubled with a tolerably profuse leucorrhœa for several months and general debility. Her health became completely restored, and she has borne several children since.

Besides the danger from hemorrhage and septicæmia, a retained placenta may undergo hydatid degeneration, or if small, it may become the nucleus for a polypoid growth; therefore, if not expelled within reasonable time, it is better to dilate the cervix by tents, and remove it, than to risk the dangerous consequences of its retention. Ergot used for this purpose will be unsuccessful, except the cervix first be dilated, then no doubt it will assist both in controlling hemorrhage and expelling the contents of the uterine cavity.

The treatment by preventive measures I have only alluded to in cases where symptoms of abortion are already present. The time for successful treatment is in the intervals between gestations, and after pregnancy has taken place, before symptoms have manifested themselves.

To be successful, a thorough knowledge of the history and causes of previous miscarriages is essential

it depends upon the bad condition of the patient, ch measures as will improve her general condition ould be prescribed. If from syphilitic influences, propriate treatment of both husband and wife may come necessary. If from uterine disease either of e os, cervix, or body, it should receive special atten- on, and an important part of the treatment consists requiring total abstinence from cohabitation for sev- al months, not only to avoid the irritation and ex- tement caused by the act if the patient is already egnant, but to avoid pregnancy and thereby give e organ complete rest, and a system reduced by pre- ous abortions time to rally. If from displacements, ey should be remedied by appropriate measures. If om excessive sensibility and contractility of the ute- ne fibres, it is particularly necessary that the organ ould have a long rest, and the advantages of change f air, sea bathing, and the use of arsenic should be nployed. When conception has taken place, there is ill time for much to be done both by treatment and dvice.

The plethoric patient can lose a little blood from the m every month with benefit, at the time when the enses would have appeared. If there is general ple- nora it is very necessary; if local, although the gen- al appearance of the patient may contra-indicate it, small bleeding will be well borne, and the danger of miscarriage very much lessened. Patients who have periodic discharge of blood from the uterus for the rst three or four months seldom miscarry. Nature elieves them of the local plethora.

I am not quite prepared to accept nature's suggestion nd apply leeches to the os after pregnancy has com- enced, but I once had the good fortune to carry a atient safely through her pregnancy, who had been ubject to numerous abortions, by applying leeches to he os after pregnancy had advanced two months, to elieve what I supposed was a local plethora—being nconscious at the time of her pregnant condition. The feeble anæmic female needs mild exercise in the pen air, and the long continued use of iron; and if she uffers from leucorrhœa and a soft relaxed os, daily stringent injections, or the use of astringent vaginal uppositories. The chlorotic patient will be benefited y the use of iron and the chlorate of potash. An ir- itable condition of the uterus may need frequent ano- lyne enemata per rectum. Irregularity of the bowels, ither constipation or diarrhœa, needs attention. Syphilis either in the man or woman requires a care- ul and long continued mercurial course of treatment. I have no knowledge of, or faith in, any special reme- lies to prevent abortion, except mercury in syphilis. Sautn highly extols the use of savin in 15 grain doses, hree times a day, for three or four months, to correct he pernicious habit; and Simpson and subsequently Barker of this city are equally as sanguine in the use of the chlorate of potash in large doses and long con- inued. I have given the latter remedy a thorough rial several times, but it has failed to meet my expec- ations. The quantity recommended is so great that I find difficulty in getting my patients to persevere with it. The only cases in which it seems applicable are nnæmic females. To such I still give the chlorate in smaller doses, and in conjunction with iron, with be- nefit. I am well satisfied that many cases of threat- ened death of the fœtus from defective nutrition, caused by impoverished blood or by defective placen- tal circulation, either from too small a placenta or fatty degeneration, have by the use of this treatment been carried safely to the full term.

Dr. Fordyce Barker exhibited a specimen of in- terest, a perfect and entire ovum, expelled at about the fifth month of gestation, with the placenta attached. The mother, 42 years of age, had had four children, the eldest 16, the youngest 7, since the birth of which she had not been pregnant until the present time. She menstruated Aug. 3d, and supposed that her period recurred again Oct. 3d, missing Sept., but in Oct. the loss was slight for two days only. Nov. 15th, she again had a loss of blood for two days. As the symptoms which accompanied former pregnancies were absent, she did not believe herself to be preg- nant, but supposed that she was suffering from irre- gularities which were due to a "change of life." Her husband has been seriously ill for ten days past, and she had endured great fatigue and anxiety from this cause. Five days since, she began to lose some blood and complained of pain in the back, but with no symptoms of uterine contraction. She was advised to go to bed, and camphor and hyoscyamus pills were given to induce sleep, as opium produced in her the opposite effect. At hast-past eight yesterday morning, the entire ovum was expelled after an hour and a half of severe labor. The duration and intensity of pain she described as being quite as severe as the labors at full term of gestation. Her husband, who is convales- cing from severe illness, when giving his consent to have the specimen taken away, facetiously remarked, that he supposed that the doctor wished to add to his medical bill his services as undertaker.

Dr. Barker then discussed, with some minuteness of detail, certain points in the paper of Dr. Church. He was firmly convinced that a healthy ovum is not easily separated from a healthy uterus. One of the very few points, in which he should feel obliged to dissent from the author of the paper, was that abortion was ever due to a "habit of the system." The term only cov- ered our ignorance of the real cause of the death and expul-sion of the ovum, at a given period in repeated pregnancies. In the progress of science, in those cases where the cause of these repeated abortions cannot be explained by any known condition of the maternal system, constitutional or local, or by any known patho- logy of the ovum itself, we may yet discover what the real disease of the ovum is. The pathology of the ovum and the placenta is yet to be fully studied. In the five years which had elapsed since he read a paper on this subject which was published in the Medi- cal Record, June 1st, 1868, he believed that he had acquired some additional knowledge from a careful study of the cases which had come under his observa- tion, but all must admit that the symptoms indicating dis-ease of the ovum are very obscure and the diagnosis of these diseases very difficult. He related one case illustrating this point. A lady, who had five times mis-carried between the sixth and seventh month, came to this city from San Francisco, with the anxious hope that she might give birth to a living child in her sixth pregnancy. She was first seen by the doctor on the 16th of September. She had the appearance of perfect health, and the most careful investigation failed to elicit any information which would explain the cause of her previous miscarriage. She was now, as she sup- posed, about six months pregnant. The sounds of the fœtal heart were very distinct. There seemed no in- dication for treatment, and the patient seemed some- what disappointed when told this by the doctor. On the 28th of Sept. he was again called to see her and found her extremely despondent, saying that she felt exactly as she did when her previous miscarriages oc- curred, but she had no symptoms indicating such a danger, except that her countenance was anxious and worn, her pulse was quick, and her temperature 100°. The sounds of the fœtal heart were distinct. The next

morning her moral depression was great, her pulse 112, her temperature 103°, and her tongue white. The sounds of the fœtal heart were feeble and too rapid for him to count. But she had no hemorrhage, no uterine pain, but an obscure, ill-defined pain and weight over the lumbar region. Abdominal palpation gave entirely negative results. The urine had been examined by Dr. Flint, Jr., and pronounced normal. A vaginal examination revealed no abnormal condition of the cervix, but pressure upon the posterior wall of the uterus caused pain, and the rectal touch gave a peculiar boggy sensation to the finger and caused faintness and nausea. These were absolutely all the signs and symptoms that could be ascertained. Placentitis was suspected, and the patient was with some difficulty persuaded to submit to venesection. About 16 ounces of blood were taken from the arm, and it was to him very interesting to remark, that after the bleeding the sounds of the fœtal heart were much more distinct and were easily counted as 140 per minute. She was kept in bed for a few days, but afterwards she was advised to go out and take exercise as much as possible short of great fatigue. She was given chlorate of potash in twenty grain-doses, three times a day. She took eleven ounces of the chlorate between this time and the period of the labor. Dec. 28th she was delivered of a perfectly healthy girl, weighing 6½ pounds. It was very thin, but vigorous, and has grown fat rapidly since birth. On examination of the placenta, there was a colorless fibrinous deposit, nearly two inches in diameter, in the centre of the placenta. There had evidently been a circumscribed centric placentitis.

As to other points in the paper, Dr. B. could not speak from personal experience as to the use of ergot as a prophylactic against abortions, but many writers concurred with the author of the paper in recommending it for this purpose. He never used the ergot to facilitate the expulsion of a portion of retained ovum, but chiefly used it to promote involution in those cases of passive hemorrhage which are sometimes met with after abortion. He had used the ergotine hypodermically for this purpose. His experience had not been favorable in using this agent in alcoholic solutions as recommended by some German writers, as Hildebrandt, Drasch, Langenbeck, as the injection caused severe local pain, and in two instances was followed by troublesome abscess. Dr. B. used ergotine ℈ij; aq. puræ, glycerine, aa ℥ij.—six drops then contain one grain of ergotine. But on the whole, he was disposed to believe that he got just as good results from the ergot, when used as rectal enema, two drachms of Squibb's fluid extract with an ounce of thin starch or arrow-root—thrown and retained in the rectum. He agreed with the author of the paper in the belief, that the mistake was sometimes made of keeping the patient too long in the recumbent posture, to prevent a tendency to abortions. Everything which enfeebles the general health increases the liability to abortion.

He referred to the error of assuming that the ovum is dead from the amount of blood lost, to the use of opiates, astringents, the tampon and other measures, and concluded by expressing his assent to most of the doctrines advocated in the paper which had been read, and his appreciation of the author's honest, conscientious work.

The Academy then adjourned.

THE WATER TREATMENT OF CHOLERA.—M. A. Netter, M.D. (*Gazette des Hôpitaux*), has a paper on the treatment of cholera by the administration of water in large quantities.

Correspondence.

A REMEDY FOR INFLUENZA.

TO THE EDITOR OF THE MEDICAL RECORD.

ALLOW me, through the columns of the RECORD, to give to my professional brethren a simple remedy for a prevailing disorder which causes a large consumption of pocket-handkerchiefs, and an ineffectual use of strong language by the patient. I have found the following combination to cut short an attack of severe influenza in ten hours:—

℞ Carbolic Acid. . . .gtts. x.
Tr. Iodine }
Chloroform } . . . .āā ℥ij

A few drops of this mixture are to be put in a test tube, and the same heated by a spirit lamp; when volatilization occurs the mouth of the test tube should be held beneath the nostrils. This operation is to be repeated every two or three hours. A violent fit of sneezing occurs at first, which is afterwards succeeded by a diminution of the symptoms.

ALLAN MCLANE HAMILTON, M.D.

114 East 30th street. February 17th.

BENNETT'S METHOD OF REDUCING DISLOCATION OF THE SHOULDER.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—A writer in the October No. of the *American Journal of Medical Science* for 1872 scouts entirely the idea of the originality of my method of reducing a deep glenoid dislocation of the humerus, and says it was taught and practised by Dr. Physick as long ago as 1790, and that it is mentioned by Prof. Hamilton in the fourth edition of his exhaustive treatise on Fractures and Dislocations, page 553. It may have been so taught and practised by Dr. Physick, but though I have at least a respectable surgical library, I do not find any mention made of it, and certainly Dr. Hamilton does not mention it, if I can understand the English language. It is true that Dr. Physick did recommend fixing the scapula in the way I propose, and fixing the scapula by pressure against the acromion is recommended by Dr. Hamilton, and this is all there is in common with my process. But what next? Neither recommends the extension in the manner practised by me. Prof. Hamilton proposes to fix the scapula by pressing against it with the foot, and then extending—how? Not downward in a line with the body, as recommended by me, but by carrying the arm outward. Dorsy and Hayes also speak favorably of thus fixing the scapula, but do not, so far as I can learn, make extension downward in a line with the body, as practised by me. Others, it is true, recommend traction in a line with the body, with the patient flat on his back, with the heel in the axilla; but under such circumstances, no fixing of the scapula is done by pressure on the acromion, and therefore it is nothing like my process. Moreover, any surgeon who attempts to reduce a dislocation in this manner shows most conclusively that he has not studied the anatomy of the shoulder-joint, or, if having studied, has failed to profit by such study; for of all the different methods resorted to in reducing this dislocation, I consider this the worst, being the least likely to succeed, and the most liable to do lasting injury to the joint. I therefore claim that, taken as a whole, no such method was ever devised or practised by Dr. Phy-

ick, or recommended or described by Dr. Hamilton; nd that, taken as a whole, I still claim it as originally ine; and I shall continue to claim it until the gen- leman, whoever he may be, shall adduce more proof o the contrary. I suppose it is wanting in etiquette or a country surgeon to claim to know anything, but I ave yet to learn that city limits contain all the nowledge in the world. "Tall oaks from little acorns row."

Truly yours,
E. P. Bennet, M.D.

Danbury, Ct.

THE ALTERATION OF PRESCRIPTIONS—A REPLY FROM THE COLLEGE OF PHARMACY.

To the Editor of The Medical Record.

N the January number of your Journal, a communi- ation appears from Dr. Barker, accusing some of our raternity of altering the prescriptions sent them by ubstituting other things than those ordered, or reduc- ng the quantities of expensive remedies when ordered. At once the public press (only too glad to seize the op- portunity) raise the "hue and cry" of "new dangers rom druggists."

While it is conceded that in our own profession, as vell as in the medical, legal, and editorial, may be found some who are incompetent, dishonest, and un- principled, yet it is proper that a reply should be made o Dr. Barker's article.

The College of Pharmacy of this city, at its meeting of Trustees in January, appointed a committee to wait upon Dr. Barker, and obtain definite information as to the complaints made, in order that the offender, if a member of the College, should be punished. The committee called upon Dr. Barker, and informing him of the object of their call, he stated that he could not name the person who reduced the quantity of quinine, &c., in prescriptions, as his authority was from a med- ical student, and not from a clerk employed in the store, though he had at the time no reason to doubt the veracity of the informant, while the person who made the error in dispensing "Tully's Powder" had been dismissed by his employer, and he thought that should end the matter. The committee reported the result of the interview with Dr. Barker at the Trustees' meeting in February, but from their inability to give any positive information as to whether there was any informality on the part of any member of the College, the subject was necessarily dropped. This will ac- count for the delay in replying to the article of Dr. Barker.

The committee believe that but very few, *if any*, would descend to such paltry and disreputable means of enlarging their profits. In regard to "Tully's Powder," they would say that it is an article unknown to many druggists, and the formula for its preparation is not in any of the text-books usually to be found in the library either of the druggist or physician. By this statement, the committee do not, however, wish to appear as exculpating the offender or palliating the of- fence. It would be well if such formulæ were written in full in prescriptions, and not designated by a "local" name or a formula unknown to many druggists.

The attention of the medical profession of this city is called to the fact, that if they *know* of any dereliction of duty on the part of any druggist of this city, who is a member of the College of Pharmacy, by mak- ing such fact known to the officers of the College it will be at once investigated, and, if true, the offend- ing member will be punished by expulsion. If they know of incompetent assistants who have not been ex- amined by the Board of Pharmacy, then that Board should be informed of the fact, and it will do its duty. There are better remedies for the troubles alluded to by Dr. Barker than rushing into print, and writing bitter things against those whom, as a body, they will find desirous to faithfully execute the wishes of the physician. Appended will be found a copy of the "Code of Ethics,"* to which the attention of physi- cians is called.

The closing paragraph of Dr. Barker's communica- tion we reprint: "Our only safety is in sending our prescriptions to those druggists whom we have found to be thoroughly competent and trustworthy, and in a careful examination of the medicines after they have been prepared."

To the first portion of the paragraph we heartily assent, and if the profession would adhere to this, our city would be freed from some who are a source of annoyance to both the medical and pharmaceutical professions, while the worthy and competent would reap a better reward for their services. This is the true remedy; but let the physician remember that "com- petent and trustworthy pharmacists" are as likely to be found in the humbler and less decorated stores of our city, as in those of "marked pretensions as to ex- ternal display." In regard to the "careful examina- tion of the medicines after they have been prepared," it is safe to say that not one physician in ten could prepare a majority of his own prescriptions, nor be able to judge properly as to whether it is correctly dispensed. It would be well if the medical students of the present day could devote some of their leisure hours to the practical details of the drug-store, or attend lectures on practical pharmacy. Then they may be able to judge whether their prescriptions are accurately dispensed, but hardly otherwise.

On behalf of the Board of Trustees of the College of Pharmacy.

By the Committee.

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* Code of Ethics of the College of Pharmacy of the City of New York, adopted at the meeting, October 18th, 1871.

Preamble.—The members of the College of Pharmacy of the City of New York, considering it necessary that some mutual understanding should exist in regard to the moral principles guiding them in their profession, hereby agree upon the following Code of Ethics:—

1. We accept the U. S. Pharmacopœia as our standard and guide for all officinal preparations, and recognize a variance from its rules only in exceptional cases, where sufficient authority has proved some other process more reliable to attain the same end.

This section is not intended to interfere with the dispensing of Prescriptions or Medicines ordered in accordance with foreign Pharmacopœias.

2. Although not a legitimate part of our business, custom and the necessity of the times warrant us in keeping the proprietary medicines of the day, yet we earnestly recommend Pharmacists, when called upon for an opinion of their merits, to discourage their use.

3. We discountenance all secret formulæ between physicians and pharmacists, and consider it our duty to communicate such to each other when requested.

4. We distinctly repudiate the practice of allowing physicians a percentage on their prescriptions, as derogatory to both professions.

5. We will endeavor, as far as lies in our power, to refrain from compromising the professional reputation of physicians, and we expect the same comity from them.

6. Since the professional training of the pharmacist does not include those branches which enable the physician to diagnose and treat disease, we should, in all practicable cases, decline to give medical advice, and refer the applicant to a regular physician.

7. The growing demands of the age require that those who follow the profession of pharmacy should be educated up to a higher standard. Therefore, we consider it our duty, individually and collectively, to encourage the advancement of knowledge in our profession generally, and particularly by stimulating our assistants to attend the lectures of the college, and by aiding and assisting them to do so.

8. Considering it expedient that some rule be adopted to enforce the provisions of our Code, we hereby agree, if any just cause of complaint of its violation be found against a member of this college, to bring the case before a special or the next general meeting of the college, when the accused, after being heard in his own defense, may be expelled by a two-thirds vote.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of Medical Department, United States Army, from February 5, 1873, to February 18, 1873.

SUMMERS, JOHN E., Surgeon.—Granted leave of absence for 15 days, from 12th inst. S. O. 23, Department of the East, February 6, 1873.

BILL, JOSEPH H., Surgeon.—Leave of absence extended 30 days. S. O. 30, War Department, A. G. O., February 8, 1873.

Medical Items and News.

JAMES LIVINGSTON BROWN, M.D., lately deceased in this city, was born in New Jersey in April, 1831, and moved with his parents to New York City while he was an infant. The intelligence, perseverance, and integrity which have made him so highly esteemed in his professional relations, were also characteristics of his youth, and secured for him even then many friends. One of these friends furnished him the instruction requisite to enter Columbia College, from which he took his degree in Arts in 1852. He immediately commenced the study of Medicine with Dr. Alfred C. Post, and in 1856 graduated at the Medical Department of the University of the City of New York. During his course of study, in both Arts and Medicine, he supported himself by playing the organ, on which he had become an accomplished performer, and the same resource served to defray, in part, his expenses during the earlier years of his practice.

In 1861 he became an attending physician to Demilt Dispensary, holding in succession positions in all but two of the departments, and for several years before his death had attended to that of "diseases of women."

In 1867 he became attending physician at the New York State Woman's Hospital, and continued in this capacity until his resignation in the spring of 1872.

At the establishment of the Strangers' Hospital, in 1870, he became the assistant visiting physician to the lying-in department and the department of diseases of females. He was also visiting physician to the St. Luke's Home for Indigent Christian Females.

In 1869 he became clinical assistant to the department of obstetrics and diseases of women and children, in the College of Physicians and Surgeons, Medical Department of Columbia College.

He was a member of the New York Society for the Relief of Widows and Orphans of Medical Men; of the New York Pathological Society; of the New York Academy of Medicine; of the New York Obstetrical Society; and of the Medical Society of the County of New York.

For a few days preceding his illness he was attending a case of typhus. On the 1st of February he was attacked with a chill followed by high fever, and until two days later his symptoms were obscure; then, however, pneumonia became evident, and the typhoid symptoms becoming more intense, he died four days from the date of his attack.

NEW YORK ACADEMY OF MEDICINE.—At a stated meeting of the Council of the Academy of Medicine, held January 28th, 1873, Bradford S. Thompson, M. D., was elected Statistical Secretary of the Academy for a term of five years from this date.

POUCHET.—M. Felix Archimede Pouchet, the renowned zoologist of Rouen, and the great advocate of spontaneous generation, died recently, aged 74 years.

DEATH OF HOLMES COOTE, F.R.C.S.—This senior surgeon to, and lecturer on surgery at, St. Bartholomew's Hospital, London, died with paralysis, December 22d, 1872. Mr. Coote was an excellent teacher, a clear-headed anatomist, and accomplished surgeon. Holmes' "System of Surgery" has much of his valuable writings.

MEDICAL LIBRARY AND JOURNAL ASSOCIATION OF N. Y.—At a session of this Association, held January 10, 1873, Dr. John C. Peters, President, in the chair, Dr. Bradford S. Thompson read a paper on "Scarlet Fever," dwelling principally on the *history, pathology, propagation, prevention* and *treatment*, based upon the latest researches of home and foreign authors, and his own observation. The paper will be published in full elsewhere. It was fully discussed by the President, Drs. Burrall, Hubbard, Foster, Garrish, Messenger, and others. Dr. Peters related unique cases illustrating its contagiousness, spoke of the importance of inunction, which should be observed from the first day, and the danger of carrying and propagating the disease by the physician; only in cases of convulsions with a fully developed rash would he employ cold affusions, and then at a temperature of not less than seventy degrees. Dr. Burrall particularly referred to cases of the fever in which the only symptom exhibited was a sore throat, showing that sore throats should be carefully watched. He advocated, as a gargle, the following combination: Bromo-chloralum, glycerine, each a teaspoonful in a tumbler of water. Dr. Hubbard approved of the tinct. perchloride of iron and digitalis in dropsical cases, and would discard blood-letting and the use of leeches in the general treatment, and showed the importance of good air, isolation, and open grates in the sick-room for ventilation. Dr. Foster relied mainly on the sustaining treatment from the first, and orders plenty of milk. In dropsical cases he would rely on gallic acid and tinct. ferri chlorid. As an unguent he advocated leaf-lard. Dr. Garrish was pleased to learn that New York was not the most unhealthy city in the world. As a rule his patients were carefully isolated from the wall, and fed on brandy and milk. He thought many cases were originated through the carelessness of the physician and defective disinfection.

New Publications.

BOOKS RECEIVED.

MEDICAL AND SURGICAL HISTORY OF THE WAR OF THE REBELLION, *Surgical* Vol. Part 1. *Medical* Vol. with appendix—Surgeon-General's office. Washington, D. C. 1873.

PROCEEDINGS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION 1872. Vol. 20.

TRANS. OF MED. SOC. OF COUNTY OF ALBANY. 1851–1870: Vol. ii.

THE SCIENCE AND ART OF SURGERY, BEING A TREATISE ON SURGICAL INJURIES, DISEASES AND OPERATIONS. By JOHN ERIC ERICHSEN, Senior Surgeon to Union College Hosp., London. Phila.: Henry C. Lea. 1873.

MEDICAL ESSAYS, COMPILED FROM REPORTS TO THE BUREAU OF MEDICINE AND SURGERY. By Medical officers of the U. S. NAVY. Washington, D. C. 1872.

DENTAL CARIES AND ITS CAUSES, with illustrations, an investigation into the influence of Fungi in the destruction of the teeth. By DRS. LEBER and ROTTENSTEIN. Translated by THOMAS H. CHANDLER, D.M.D. Prof. Mechanical Dentistry, Dental School, Harvard Univ. Philadelphia: Lindsay & Blakiston. 1873.

Original Communications.

LACERATION OF THE PERINÆUM,

INVOLVING THE SPHINCTER ANI, AND OPERATION FOR SECURING UNION OF THE MUSCLE.

By THOMAS ADDIS EMMET, M.D.,

ATTENDING SURGEON OF THE WOMAN'S HOSPITAL, STATE OF NEW YORK.

(Read before the New York County Medical Society, January 27th, and State Medical Society, February 4th, 1873.)

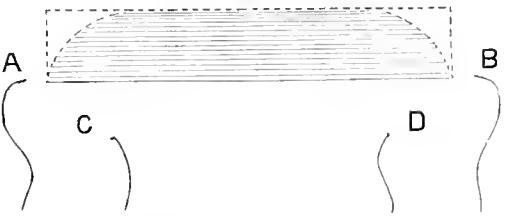
It is not my purpose to enter at length into a consideration of the causes of laceration of the perinæum. It is, however, of no little interest to determine how far a difference in shape and depth of the pelvic outlet, meddlesome midwifery, or other causes may render women liable to a lesion from which other animals are, as a rule, exempt in giving birth to their offspring. When the laceration has been so extensive as to involve the sphincter ani and a portion of the recto-vaginal septum, it is the result generally of instrumental delivery. While this accident is the exception, and may occur in the hands of a most skilful operator, we have too often the evidence to doubt its frequent occurrence from untimely interference, faulty instruments, and a lack of skill. Many of the profession attach but little importance to a loss of the perinæum, and regard a laceration, to a greater or less extent short of involving the sphincter, as a natural consequence of child-bearing. If this be so, woman has not been favored.

Laceration of the perinæum down to or involving the sphincter, sooner or later must affect the normal position of the uterus, by allowing a prolapse of the posterior vaginal wall, that of the anterior wall being secondary to a change of position in the organ. When a female is standing upright, a perpendicular line drawn from in front of the sphincter ani will intersect the os uteri, if the organ is in its normal position. By the use of Sims' speculum, or any other perineal retractor, we demonstrate the relative position of the uterus, for the cervix is exposed in this perpendicular line. Were a female to stand on her feet with the perinæum thus retracted, the uterus would drop through the vulva, were it not retained by the tonicity of the vaginal walls and the connective tissues of the pelvis. There are causes at work to explain the fact that often a long period of exemption exists, after extensive laceration, without any marked evil consequences following, while on the other hand we can trace directly to a want of proper perineal support results not always in keeping with the extent of injury. So long as the vagina maintains its integrity, due indirectly to its pelvic connections, there may be no symptoms presenting themselves for interference, the female remaining only liable to the occurrence of some future difficulty as a consequence. While the uterus remains in position and the vagina retains a natural size, the walls of the latter lie in close contact so as to exclude the atmospheric air. As the vagina becomes relaxed, with its outlet unnaturally open or patulous, the external air is drawn within the canal to a greater or less extent with every movement of the body.

This is a source of great annoyance, for on making any quick movement of the body, as turning suddenly in bed, the air retained within the canal becomes forcibly expelled, as the escape of flatus from the anus. Should there have been no previous indication of trouble, it would be now unwise to delay longer closing the perinæum sufficiently to give a firm support to the posterior wall of the vagina, without reference to other treatment which may be called for. As I wish to direct the attention of the Society more particularly to the mode of securing a union of the lacerated sphincter, it will be unnecessary to enter into detail of the more simple operation for closing the perinæum, and which would be in part but a repetition.

When the perineum and the muscular ring forming the sphincter ani has been divided, a gaping triangular opening is left, the base of which would be formed by the lacerated muscle and the apex by the limit of the laceration in the recto-vaginal septum. For the convenience of demonstration we will describe the shape of the divided sphincter as a parallelogram. Gradually the muscular fibres retract in proportion as they have been freed. Consequently the fibres which have formed the inner surface of the circle, when in its integrity, will have shortened more than those on the outer margin which still remain attached to the surrounding tissues. A glance at the diagram will show

Fig. 1.



the corners rounded off, so as to present a convex surface, by this shortening of the inner fibres from the dotted outline representing a parallelogram, the original shape of the muscle just after the rupture. This shortening of the fibres has been overlooked by the profession, and in cases of long standing is the cause, after an operation, of failure in gaining entire control over the escape of flatus and the contents of the bowels when in a fluid state. As the operator only extends the denuded surface from above to A B, the apparent limit of the laceration, but a small portion of the ends of the muscle can ever be brought in contact. In a large number of cases not a fibre of the muscle is united, although the perinæum may have been restored and the laceration through the recto-vaginal septum closed by the operation. To unravel the cause of failure and to devise the means of obviating it has occupied my attention for years. To appreciate so simple an explanation has cost me more thought than any other point in the whole field of the branch of surgery to which I have devoted myself.

The success of the operation is due to the point at which the first suture is introduced in relation to the edges of the divided muscle. If the first suture be entered on the line and a little outside of A B, Fig. 1, at the point which would seem most appropriate, but a small portion of the muscle could be approximated, as shown in Fig. 2, and incontinence to some extent must be the consequence.

Introduce the suture, however, at some distance behind the muscle, toward the coccyx, at the points C D, Fig. 1, and we see at a glance, by Fig. 3, that on securing the suture the divided edges of the sphincter must be turned up and brought in perfect apposition.

I will now briefly describe the operation. The patient should be placed on the back, with the legs flexed on the abdomen, and held by an assistant on each side. The surfaces which have been lacerated, and to

be denuded, are generally well mapped out by a slight cicatricial glaze, and under ordinary circumstances,

Fig. 2.

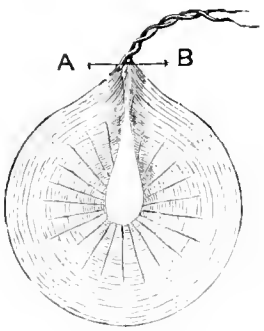
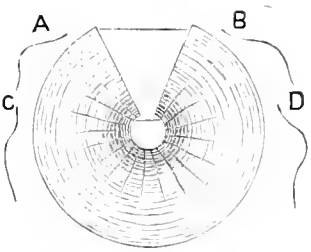


Fig. 3.



without sloughing has occurred, there can be but little difficulty in determining the extent. I prefer the use of a pair of slightly curved scissors to the knife; the surfaces can be removed with greater despatch and with less loss of blood. The denuding should be commenced from the most depending point, and extended upward so as to be free from the annoyance of blood flowing over the surface to be freshened. If we examine carefully the extremities of the lacerated muscle, we will find a slight pit or depression at each end, which has been caused by the contraction of a portion of its fibres. It is necessary to freshen these surfaces, for by doing so we denude the ends of the muscle, and on that side of the depression go over to a great extent the surfaces included between the dotted angles shown in Fig. 1. At the commencement of the operation, seize with a tenaculum a portion of the tissues at one of these points, with the scissors remove a narrow strip entirely around the laceration to the opposite end of the muscle, and as close to the edge of the rectal mucous membrane as possible without wounding it. One strip after another is to be thus removed until we reach the neighborhood of the caruncule above. If there should be a partial prolapse of the posterior wall, it will be necessary to extend backward the denudation on the vaginal wall sufficiently to turn in the excess of tissue and gain a firm support with the perinæum. I have long since exhausted my ingenuity in devising hollow needles of various curves to convey directly the wire and needles of different shapes and size. I have settled down to the use of an ordinary stout needle, about two inches in length, straight, or with but a slight curve near the point. A needle with a large curve would be best adapted for this operation, but without it be made square towards the eye it is apt to turn in the grasp of the forceps or break by bending. If a hollow needle is used, shaped as an awl, but with a larger and a double curve, it is as difficult to direct its course without greatly increasing its diameter. This is objectionable, for, in such vascular tissue, the risk of thrombus, and abscess afterwards, is greatly increased if the calibre of the passage made by the needle is much larger than necessary for the reception of the silver wire. If a simple needle is used it should be armed with a double silk ligature, secured from slipping by a half-knot at the eye.

With the index-finger of the left hand in the rectum to serve as a guide, the needle is introduced behind the muscle to the left, at the point D, and made to sweep around the angle of laceration in the septum to the point of exit at C, by gradually rotating the forceps. As the point punctures the skin in its exit, the index-finger is withdrawn from the rectum to aid the passage of the needle, by sliding back the tissues sufficiently for it to be seized by the forceps and drawn through. The second suture is introduced just outside of the end of the muscle, and in the same plane with the divided rectal edge. The third suture is to secure the vaginal edge of the laceration. It should be made to include the tissues liberally, and to sweep around the angle at some distance beyond the first and second suture, as this one is most liable to cut through the recto-vaginal septum.

The third and fourth suture would bring together the portion denuded on the posterior wall of the vagina, with the view of increasing the depth of the perinæum. Should the prolapse have been more extensive, so as to need the operation for rectocele, the denuded surfaces on the septum should be secured by interrupted silver sutures extending within reach of those intended to form the perinæum. If these sutures in the vagina are properly bent flat to the surface, they may remain undisturbed twelve or fourteen days. They can then be removed while the patient lies on the back, using a small-sized Sims' speculum introduced under the arch of the pubes. If the necessity does not exist for making the perinæum unusually thick and strong, the fourth and fifth sutures are merely passed through one labium and across through the other. A portion of silver wire is to be twisted to the end of each silk loop, and drawn through in turn. It is necessary to secure first the lowest suture, C D. This is done by seizing the ends of the wire at a proper distance, so that the index-fingers may be used to slide the tissues firmly down on the suture, as moderate traction is made with the hands. The suture is then secured, without relaxing the traction, with several half-turns made by reversing the position of the hands from one side to the other. Each suture is thus in turn secured from below upward. Experience can alone indicate the proper amount of tension to be made, and success to a great degree will depend upon this manœuvre. The parts should be just brought in apposition, and no more, for in a few hours there will be sufficient swelling to force the tissues in close contact. If the sutures have been twisted too tight, and especially if they have been introduced in too superficial a manner, they will cut out from behind forward, so as to leave a recto-vaginal fistula, or the tissues in front will have become sufficiently strangulated to set up some inflammatory action, resulting afterwards in a labial abscess. I am in the habit of twisting the sutures, and cutting them off some three or four inches in length. These are then secured together, as the radii of an open fan, by twisting a loop of wire around their ends. This loop is prevented from slipping off by bending over and backward a portion of one of the sutures, and the ends of the others are cut off at an equal length. This arrangement keeps the sutures stationary and guards against a common source of inflammation from violence, to which the separated and unprotected ends would be constantly exposed, when

too short. The patient is placed in bed on the back, with the knees tied together and a pad between them. The after-treatment may be summed up in a few words.

If the bowels have been thoroughly acted upon previous to the operation, they may remain undisturbed for twelve or fourteen days without discomfort. The diet should be so regulated, and opium administered when needed in sufficient quantity, to keep the bowels quiet. The chief care is in emptying the bladder, so that the urine is not allowed to drip from the catheter on the uniting surfaces below. If the urine, even in small quantity, is permitted to pass backward into the vagina, it will find its way readily between the denuded surfaces, and when the sutures are removed it will be found that but little or no union has taken place. With an inexperienced nurse, I have the bowels moved by castor-oil on the sixth day, and remove the sutures a day or two afterwards. With a nurse accustomed to the operation, I withdraw the sutures in a week and have the bowels moved a few days after, for the nurses learn to support the parts with their fingers while the bowels are acting, so as to relieve the recently-united surfaces from all strain. It is a good plan to have a small quantity of warm olive-oil gently thrown into the rectum just before the bowels are moved. When the sutures are to be removed, the precaution should be taken to draw them out across the buttock, on that side of the loop which has been cut, so that the parts will be kept in contact by the suture until its withdrawal. It is necessary that the knees of the patient should be kept tied together for several days after the sutures have been removed, and always at night for some time longer. A few days after the operation the position may be changed from the back to the side, provided that the sutures are protected, and the move can be made by the nurse without effort on the part of the patient. Between the second and third week the union will be firm enough to allow the patient to sit up, but she should be instructed to keep her limbs together as much as possible, for although there may now be but little fear of laceration, yet absorption will rapidly take place if a sufficient amount of traction is exerted.

It is important that we should consider more in detail the action of the first suture, on which so much depends. As this suture runs backward, obliquely across the diameter of the rectal extremity, it seems impossible that it could be secured without shutting up the anus. This, however, is deceptive, for the ends of the muscle must be drawn upward on tightening the suture passed above through the recto-vaginal septum, which is a fixed point to a certain extent. The relative position of this suture is shown in Fig. 3 to be above the anus when twisted, and as the rectum turns immediately backward into the hollow of the sacrum, the outlet is in no manner encroached upon. When this suture is secured, its tendency is to roll upward and outward the tissues from the rectum towards the vagina, and to bring below the edge of the laceration a portion of undenuded mucous membrane of the rectum in contact throughout its course. This suture therefore, along the rectal portion, acts as a safeguard in relieving the second suture from tension, and is a protection against the tendency of flatus to force a passage through into the vagina. In my former operations, this second suture, passed on a line with the edge of the laceration through the rectum, was the first and main stay. I then frequently noted as the other sutures above were secured, that the tissues were forced downward with the effect of springing apart, as it were, the loop of this the first suture, and a large portion of denuded tissue became rolled out into the rectum. The result was the frequent occurrence of a smal recto-vaginal fistula at the thinnest point in the septum. This opening was generally just behind the sphincter, and difficult to close from the constant action of the muscle, so that I generally divided anew the recently united perinæum and sphincter, denuded thoroughly the edges of the opening, and closed the parts again as in the first operation.

It is now some two years or more since I appreciated fully and have practised this method of operating. In this time I have had eleven cases with more or less extensive laceration of the septum beyond the sphincter. I am happy to state that I have not had a failure out of the whole number; they were all, however, patients in public or private hospital practice, where I have had the advantage of thoroughly trained nurses. Two out of the number at least have borne children since and were patients in private practice. One was a patient of Dr. J. B. Nelson, of the city of New York, who was present at the operation, with Dr. T. G. Thomas. This lady had married late in life and had been delivered by forceps of her first child in Florida, a few months before she came under my care. There was yet but little prolapse of the posterior wall or of the uterus; but it was an unusual case, for the laceration was double beyond the sphincter, leaving a long tongue of tissue between, which was cicatricial in character from sloughing. The parts were brought together in the usual manner; three sutures were made to traverse the flap, but when these were secured there existed an unusual amount of tension. Union however took place throughout, leaving a good firm perinæum. She was delivered without difficulty, by a natural labor, of a large child about a year after the operation, and has since been well.

The other case was a lady sent me by Dr. G. F. Carmichael, of Fredericksburg, Va. The laceration extended an inch beyond the sphincter, with a rectocele and the os uteri presented at the vaginal outlet. She had been delivered nearly a year before by forceps of her first child, which was of an unusual size. I was obliged to devote several months, while she was under daily observation, to reducing the size of the uterus and healing an extensive erosion with endometritis. The operation was successful, and shortly after her return she became pregnant.

Dr. Carmichael has since informed me that she was delivered, after a natural labor, of a large child, that not the slightest laceration took place, and that she has since been in excellent health. I have no doubt pregnancy has occurred in some of the other cases, but if any bad result had followed the delivery I am certain that I would have been informed of the result. In my experience, from previous operations, not a single instance of laceration has occurred in the line of union. I have had several instances where partial laceration has recurred from the same exciting cause which has existed, but it has always been to one side or on the other of the line united by the previous operation.

One point more, and that in reference to the proper time when the operation should be performed. When the laceration has extended through the sphincter, my conviction is that in every instance where it is possible to do so the parts should be brought together immediately after delivery. It is true, observation has taught us that the lochial discharge is poisonous to a healing surface, yet a large number would be successful with a little additional care. The operation would then be comparatively a simple one, as the muscular fibres have not become atrophied, and it would be unnecessary to pass the suture behind the muscle. Something would be gained in every case, and support would be given

to the uterus, for a while at least, until it had become somewhat reduced in size, and time gained for the overstretched vaginal tissues to recover in part their tone. A week thus gained, in giving a proper support to the parts at this time, may be the means of saving the patient from the necessity of undergoing treatment for months to reduce the size of the uterus,—this she may be spared, even if the operation itself should prove a failure.

At the reception of the injury the rent through the septum is more extensive than after the edges have cicatrized. If proper care has been taken by injections to keep the parts free from irritating discharges, the edges will generally unite to within a short distance of the sphincter. My experience has been confined almost exclusively to the treatment of cases some time after the parts have healed, and I have met with but few instances among them where the fissure remaining in the septum could not be included within the deep sutures passed as I have described. When the exception has existed, I have denuded the edges and brought them together down to the sphincter with a sufficient number of interrupted sutures. I have then afterwards closed the perinæum by a subsequent operation, or performed both operations together. For some years past I have followed the latter plan, passing the deep perineal sutures at a right angle to, and between, the three or four lower interrupted ones. The condition of the patient after delivery may be too critical to admit of the additional operation for bringing together the edges of an extensive laceration through the septum. Under these circumstances I should deem it advisable to introduce the deep perineal sutures, to include as much of the septum beyond the muscle as possible. If a union of the perinæum is thus gained, with a portion of the septum beyond the sphincter, but a small recto-vaginal fistula will remain. This may prove a discomfort, but its closure can be safely deferred. When an operation cannot be resorted to immediately after the injury, the knees should be kept tied together and the greatest care given by cleanliness to free the parts from irritation. Before the patient is allowed to assume the upright position, some mechanical support must be resorted to for the purpose of lifting the uterus from the floor of the pelvis, and keeping the organ partially anteverted, so that there may be no prolapse of the vaginal walls. After she has recovered her strength, if the child has been still-born, the operation should be performed without further delay. For the welfare of the child, if she be nursing, the operation should be deferred until it is old enough to be weaned with safety, provided the condition of the mother will admit of the delay by giving sufficient support to the uterus.

PERCY'S SO-CALLED ALKALOID HYPOPHOSPHITE.*

By EUGÈNE PEUGNET, M.D.,

NEW YORK.

It is certainly most gratifying to observe the rapid progress we are making in practical therapeutics by means of physiological chemistry—but we must not nullify it by adopting either preconceived ideas or an unsupportable hypothesis. Dr. S. R. Percy has again placed the profession under obligations to him, by presenting it with what may prove to be a valuable therapeutical preparation of phosphorus. I am well aware that some may cavil, as has been done in reference to his previous essays on digitalis, veratrum viride, etc.; but it must be admitted, that if those essays did not yield any practical results, still they were the basis of further researches, which have led to substantial ones.

Dr. Percy in his prize essay, "What Physiological Value has Phosphorus as an Organismal Element?" has given us an almost complete chemical history of phosphorus down to the present time; but we regret that he did not enter more fully into its toxicology. The essentially original part of the essay is that which relates to his so-called alkaloid hypophosphite. Basing himself on the well-known existence of lecithine, a neutral phosphoretted fatty matter which is found in the nervous tissue, fibrine, blood, bile, and yolk of egg; which is composed of nervine with one atom of each of the following acids: the oleic, margaric, and phospho-glyceric, is, therefore, an acid phosphate alkaloid, and not, as the Doctor asserts, a hypophosphite, for the phospho-glyceric ($C^6\ H^7\ O^7 + Ph\ O^5$) is composed of glycerine and phosphoric acid.

He has endeavored to form an analogous substance, an artificial lecithine, by dissolving phosphorus in a mixture of cocoa butter and Valentine's beef-juice, then by the action of pure oxygen to so oxidize the phosphorus as to form hypophosphorous acid, believing that each atom of it would, whilst in its *status nascentium*, combine with two units of the oil and one of nitrogen from the beef extract. This result would no doubt have been very gratifying, but I do not believe that the Doctor succeeded. As he was out of his alkaloid hypophosphite, I requested M. Ferd. Spangenberg to prepare some according to the Doctor's formula, which I know was accurately followed.

When prepared, I exhausted the preparation with water just warm enough to melt the theobroma, consequently much below the boiling point, 212° Fht.; the liquid thus obtained was of a pale sherry wine color. On subjecting it to the nitrate of silver test, the reaction indicated the presence of hypophosphorous acid, whilst the chloride of barium, acetate of iron, and acid nitrate of mercury tests failed to indicate the presence of a trace of phosphoric acid. In order to obtain a more positive result, I digested the liquid with animal charcoal, the purity of which I previously tested, as it frequently contains phosphoric acid, with a similar result. The exhausted theobroma was then subjected to Misterlich's distillation test, and utterly failed to indicate the presence of phosphorus. It is therefore evident that this preparation is *not an alkaloid*, but that *it is anhydrous hypophosphorous acid* dissolved in cocoa butter, which it would be utterly impossible to combine by any other known process.

Chemists have been heretofore indefatigable in their researches and efforts to prepare compounds of phosphorus, which they presume will be efficacious, and a few of which have, no doubt, a certain efficacy. *But in preparing their various combinations they obviously forget that the organism is a vast and complete chemical laboratory*, in which certain processes are constantly going on, and that it is not so much compounds that are required, as organismal elements for it to work on, and effect the chemical changes necessary for the process of assimilation. But there are certain conditions of the organism in which this process cannot be properly carried on; therefore the sound therapeutist, fully appreciating it, endeavors to meet the indications, and he is frequently at a loss for a proper preparation of phosphorus. The oleum phos-

* Prize Essay of the American Medical Association, 1872.

phoratum does not always answer. 1, its oxidation is but partial; 2, its administration is not always free from danger. The acid phosphates are certainly beneficial in certain gastric disorders accompanied with nervous depression, but are of little use in the more serious disorders of the nervous system. Phosphoric acid is the most effectual officinal preparation, and I believe far superior to the acid phosphates. The phosphite of zinc is excellent, owing to the rapidity of its action; but is objectionable on account of its odor and luminous properties when rubbed. Hypophosphorus acid has only been administered as a hypophosphite, but I doubt its efficacy when thus administered.

I believe that the preparation given to the profession by Dr. S. R. Percy will prove to be very efficacious. The cost of preparing it is small, it can be readily administered, and its odor can be disguised by capsules; but the most important advantage is, that it is given in an anhydrous form, and more readily absorbed when thus combined; and is no doubt decomposed, in the process of chylification, into phosphoric acid and phosphoretted hydrogen (the latter is a serious objection, owing to the eructations it may give rise to), readily combining with the oleic and margaric acids, and glycerine then acting upon the nervine or lecithine, that alkaloid which is the *sine qui non* of a sound nervous system.

The Doctor has also suggested that a liquid preparation similar to the first can be made with lard-oil. I have not experimented with it; but, reasoning *à priori*, I do not believe that the Doctor's hypothesis is more tenable than in the other; for it would be necessary to first decompose the olein into oleic acid and glycerine, and the margarine into margaric acid and glycerine; then the hypophosphorous acid in *status nascentium* would combine with the glycerine by decomposing itself into phosphoric acid and phosphoretted hydrogen, the former of which would with the glycerine constitute phospho-glyceric acid. Finally, the three acids would act upon the beef extract, take up its nitrogen, and form an artificial lecithine, which, it must be admitted, *is rather hyperbolical*.

It might be suggested that this lecithine could be extracted in its natural form from the brains of lower animals and fish. This is apparently plausible, but the same process which develops, forms it in their organisms, is also carried on in the human species. It is not absorbed as such, but is the result of chemical actions and changes constantly taking place in the organism, which we have been unable to fathom out as yet. Would it not, therefore, be much more *rational* to endeavor to introduce into the system its organismal elements in a form in which they will be readily assimilated? It is undoubtedly true that, in some cases, this process cannot be carried on; then, *à fortiori*, it is not probable that this alkaloid can be absorbed as such, for its very composition militates against it, unless the laws of digestion and absorption have been *misinterpreted*.

Proceeding beyond hypothesis, the Doctor has resorted to experiments which certainly demonstrate that this preparation of phosphorus is easily assimilated, and my own observations lead me to concur with him as to its great therapeutical value.

Case I. A gentleman, æt. 40, engaged in active business, involving great responsibility, and requiring a constant overstrain of the mental and physical powers, was affected with loss of memory, insomnia, inappetency, and vertigo; his urine was loaded with the oxalate of lime. His family history showed a tendency to brain disease in a marked degree. I gave him ten grains of Dr. Percy's phosphoretted cocoa butter three times a day; his improvement was so great that he indefinitely postponed a contemplated sea-voyage. About a year previously he was similarly affected, and the *phosphite of zinc* had as beneficial an effect. But the acid phosphates failed entirely.

Case II. A married lady, suffering from anæmia and nervous depression, with inappetency, insomnia, and a constant feeling of lassitude, rapidly improved under ten-grain doses administered three times a day.

Case III. A lady, æt. 73, had been suffering for six months with chronic diarrhœa of a malarial origin which had resisted all treatment. She was very much depressed, insomnia, inappetency, and marked tympanitic condition of the intestines. As the diarrhœa was evidently due, in a great degree, to the atonic condition of the intestinal tract, I combined one-twentieth of a grain of strychnia with six grains of the phosphoretted cocoa butter, three times a day; the strychnia was gradually increased to one-tenth of a grain. The improvement in her case was marked and permanent.

The Doctor administers this preparation in five-grain doses. I believe that it can be given in ten-grain doses, as each ten grains contains one-tenth of a grain of hyperoxidized phosphorus.

As there are no doubt many who would like to try this new preparation, they can procure it at Spangenberg & Boettcher's, corner 3d Avenue and 34th street, and at Spangenberg's, No. 1165 Broadway.

Original Lectures.

THE TREATMENT OF UTERINE DISEASE.

A LECTURE BY

PROF. A. J. C. SKENE, M.D.,

AT THE LONG ISLAND COLLEGE HOSPITAL.

Gentlemen—I shall make a few remarks at this hour upon the general *treatment* of uterine disorders. Heretofore I have spoken more particularly of their pathology and symptomatology. I begin with *corporeal endometritis*, and you will observe, if you follow me closely, that the treatment of this affection involves about all that is requisite in the management of the cognate malady, *cervical endometritis*. Before settling upon a plan of treatment, we naturally inquire what course the disease is likely to take if left without any treatment at all. In the present case, we have no difficulty in finding an answer to such an inquiry. Go into the hospital wards; watch the out-patient service of this institution; and you will gather abundant reasons for declaring, that neglected cases of corporeal endometritis do not, of themselves, tend to recovery. On the contrary, the constitutional symptoms generally increase in gravity, and not unfrequently the local trouble gets worse also. At the "change of life," when menstruation ceases entirely, and the final involution of the uterus takes place, benign diseases usually disappear; but under no other circumstances can we look for such a favorable termination. Active treatment, then, is necessary in order to relieve the hyperæmia, quiet the irritation, and restore the normal function of the organ. A few years ago, the teachers of medicine would have puzzled you with conflicting dogmas, and left you undecided whether to depend upon *local* or

constitutional measures of treatment. Happily to-day you are not to be placed in any such *limbo of doubt*; the judgment of the profession is that you shall make your treatment both *local* and *constitutional*.

Turning our attention to the constitutional treatment first, we naturally inquire if there can be found any medicines which, when introduced into the general circulation, will act directly on the mucous membranes of the uterine cavity, arrest morbid action, and restore the natural condition of the part. In other words, can we rely on any specific uterine medication in the case under consideration? This question must, I think, be answered in the negative. In your books you will find a host of remedies for menstrual derangements, leucorrhœa, and other uterine troubles; but you will discover sooner or later, I fear, that their virtues are greatly exaggerated; such, at least, has been my experience. Dr. Matthews Duncan, in treating of the hemorrhage that occurs in cases of uterine fibroma, declares positively that no medicines will control it; and the same statement may be made, with but little modification, in regard to menorrhagia arising from endometritis.

The great number of remedies employed in the treatment of this trouble is almost proof positive that none of them are reliable. A few years ago the iodide of potassium was greatly lauded in Germany by some who believed that it had a peculiarly curative influence in uterine leucorrhœa. From what we know of the action of this drug on mucous membranes in other localities, we might readily infer that it would act favorably in uterine disease; but, after having given it a fair trial in many cases, I must say that my hopes have been disappointed; I have not observed any very favorably marked results from the treatment. It may be worth trying, as an auxiliary, in cases of persistent leucorrhœa when the patient is of full flesh. Fat people, as a rule, bear this remedy best. But beyond this class of cases little benefit can be expected from the remedy.

We must not, however, discard *constitutional* treatment because it is not more direct and specific in its action. There are remedies which, by acting indirectly, aid especially by relieving congestion of the uterine mucous membrane, and are too valuable to be lost sight of in the treatment of uterine disease.

A patient with endometritis, who has, for instance, a coated tongue, constipated bowels, and impaired appetite, and loaded urine,—all indicating that her digestive organs are acting sluggishly,—would be benefited by appropriate general remedies. A dose of calomel, followed by some mild saline cathartic, while it would improve her digestion, would perhaps do more indirectly to relieve congestion of the pelvic organs than any other remedial means at your command. This you can clearly comprehend, when you remember the direct connection of the portal and pelvic veins. Where the portal vessels are engorged, there is necessarily a sluggish condition of abdominal circulation, which sooner or later communicates itself to the pelvic organs.

Now, in such cases, we must secure, if possible, freedom of abdominal circulation. Without it our best directed efforts are often unavailing. No remedy accomplishes this better than occasional mercurial cathartics, followed by salines. I desire to press this point, because the enemies of scientific medicine have created, in my judgment, an unfounded prejudice against the use of mercury, which is liable to deter the physician from using one of the most valuable remedies which we possess for the relief of abdominal and pelvic congestion.

In other cases, where there is marked debility, a rapid, thready pulse, and much nervous restlessness, you may, to some extent, control the profuse menstruation by the use of digitalis, aromatic sulphuric acid, with or without small doses of morphine. Beyond these means I have not much faith in constitutional medication for the arrest of hemorrhage, not even in the much vaunted ergot.

During the interval between the catamenial periods, every means should be employed to improve the general health and strength of the patient, such as exercise in the open air, followed by periods of rest in the horizontal posture; or as Dr. Wright has tersely expressed it: "exercise should be enjoined, exertion forbidden."

Good nutritious food, with tonics suitable to each individual case, should also be prescribed. The blood is apt to become impoverished in all this class of cases; hence ferruginous tonics are called for; and you will find that judgment and skill are required in adapting these remedies to the capricious stomachs of your patients. The more agreeable chalybeates usually answer best, such as *ferri pyrophosphate* or *ferri et potassæ tartrat.* And you should always see to it that your patients do not suffer from constipated bowels while taking iron.

From the fact that uterine disease tends greatly to debilitate the nervous system, you will have to give special attention to that, and you ought always to employ the more restorative nerve tonics, rather than anodynes, because this class of people, above all others, are exceedingly prone to acquire the habit of opium-eating. The possibility of this result should never be lost sight of when prescribing for this class of cases.

The comp. syr. of the phosphates, or the phosphates given in connection with cod-liver oil or the syr. of the iodide of iron, taken after meals, will answer well in many cases. They are food for the nervous system. I must not fail to mention also strychnia, iron, and *arsenic*. These are among our most valued remedies in sustaining the flagging powers of exhausted nerve energy.

We have other valued resources in a class of *nervines*. Uncomfortable symptoms of a nervous character, known by the vague terms of "nervous irritability," "nervous hyperæsthesia," etc., are often relieved by the valerianate of ammonia, or the bromide of potassium, of ammonium, or of lithium. Of drugs employed to relieve excessive irritability of the nervous system, perhaps the bromides are our most reliable agents. I have used them with most satisfactory results. We should never lose sight of the fact, however, that their continued use tends to anæmia, and that in some cases of anæmia of the nerve centres they depress the nervous system and intensify the nervous phenomena.

To sum up the *constitutional* treatment of uterine disease, I may briefly state, that the general principles which govern us in the management of the various forms of *general debility* apply in the case under consideration.

Bear in mind the important therapeutic fact, that the treatment which most improves the general nutrition and increases the supply of rich, well oxidized blood, will do most towards improving any local disease. Before leaving this subject I must call your attention especially to the use of *quinine* in the treatment of uterine disease.

Those of you who practise in malarial regions will make but poor headway in the treatment of uterine disease without this most valuable agent. I have re-

peatedly observed cases of uterine disease, when menorrhagia and amenorrhœa were prominent symptoms, which had resisted the usual treatment, improve very markedly under the free use of quinine. I have no words of explanation to offer as to its mode of action, but of the therapeutic fact there can be no doubt.

Local treatment should be employed with the view of accomplishing two objects: *first*, to remove the disease; and, *second*, to restore the organ to its normal condition. You will at once, perhaps, infer that, if we attain the first object, the second will follow as a natural consequence; but it may or may not, according to the character of the treatment employed. I am satisfied that, in times past, and even at present, much of the treatment of uterine disease, while it arrests the inflammatory trouble, proves so destructive to the normal structure of the organ as to render the last condition of the patient worse than the first.

Local treatment should be employed principally, if not wholly, during the interval between the menstrual periods. We are rarely called upon to make local applications during the catamenial flow.

If there is only a slight excess of the menses we are not called upon to do more than keep the patient at rest. Indeed, in cases of endometritis, free menstruation is undoubtedly conservative. It is a natural effort to relieve the local congestion; and, if the general strength of the patient does not greatly suffer, we need not try to arrest the flow.

We should rather endeavor to remove the *cause* of the profuse discharge before the recurrence of the next period.

Regarding local treatment there is perplexing diversity of opinion, perhaps more than in any other department of medicine.

Disregarding much of the confusing and contradictory literature of the subject, I shall endeavor to fix your attention upon a few points which I regard as well established and likely to be of service to you hereafter.

The three important questions which come up for our consideration on this subject are: 1st, to what part of the diseased organ shall we make our applications? 2d, what curative agents shall we employ? and, 3d, how shall we apply them? If you turn to your text-books or the current literature of the profession in search of an answer to the *first* question, you will find the greatest diversity of opinions and will likely be most thoroughly perplexed. The pioneer gynæcologists of Europe, such as *M. Gendrin*, *M. Jobert de Lamballe*, *Bennet*, and *Simpson*, rarely, if ever, made applications beyond the os internum; believing that uterine inflammation could be cured by treating the *cervix* and *cervical canal*.

On the other hand, we find that *Aran*, *Scanzoni* and *Gantillon*; and, in our own country, *Dr. Henry Miller* (who was, by the way, the first to employ intra-uterine medication in this country), *Kammerer*, *Nott*, *Paulee*, and many others, rely, to a very great extent, on intra-uterine applications for the relief of endometritis and uterine catarrh.

Many more names might be mentioned to show the want of harmony among physicians on this point; but no useful knowledge could be gained thereby.

The only point of interest which we can learn from this review is, that, so far as I can judge, intra-uterine medication is more extensively employed now than formerly. Believing, then, that time tends to drift us to correct therapeutics, we may infer that local applications to part or to the entire lining membrane of the uterine cavity are often necessary, if not indispensable in treating endometritis.

In seeking an answer to our *second* question, we encounter a variety of medicinal agents, ranging from the actual cautery to the blandest anodyne lotion. Reviewing the nature and effects of the various remedies used in the treatment of uterine disease, we could in no way be guided thereby in making a selection.

Bearing in mind, however, the second object to be gained, viz.: to restore the organ to health, and leave the uterus *uninjured in structure*, we are bound at once to reject all the more powerful and destructive agents, such as strong nitric and chromic acid, caustic potash, the actual cautery, etc., etc. All these have been used, and are now, though less extensively, I trust, than formerly, in the treatment of simple chronic endometritis, or hyperæmia of the mucous membrane of the cavity of the uterus.

Leaving out of account the value of these potent agents in the treatment of *malignant* diseases of the uterus, I desire to be distinctly understood as opposed to their use in the treatment of *benign* uterine disease. I readily admit that inflammation of a mucous membrane can and may have been "cured," as the expression is, by such means. I cannot doubt but that a surgeon can "cure" a gleet by burning out the whole mucous membrane of the urethra with caustics or fuming nitric acid! There would be nothing left, in time, but a cicatrix which could not of course secrete the glairy mucous discharge of gleet; but most men, I am inclined to think, would prefer the disease to such treatment with such results.

The oculist could "cure" a chronic conjunctivitis in the same way; but I fear the eye would hardly be presentable afterwards, and it would surely fail to perform its normal function. Still, there are those who treat the same affections of the mucous membrane of the *uterus* with these destructive agents, and the results which follow can be easily imagined.

It may be argued, I am aware, that *strong* caustics are being used less and less by the profession in the treatment of uterine disease; and I am glad to believe that such is the case. The nitric acid and chromic acid and other caustics are being laid aside, but only, I fear, to give place, in many cases, to a new, but none the less destructive, agent;—I allude to *galvano-cautery*.

This, as you know, is becoming the "fashionable" caustic or cautery of the day; and I trust I most thoroughly appreciate its value in the treatment of *malignant* disease, when the destruction of tissue is called for. But in the treatment of benign inflammation it cannot fail to work a great and uncalled for destruction, like the other agents used in the past. I can see no argument for or against it that may not be urged in the case of the caustics mentioned.

In the management of uterine disease, we may be guided by some of the generally accepted rules laid down by surgeons for the treatment of inflammation generally, such as: place the diseased organ at *rest*; quiet irritation by sedatives; and relieve the congestion by depletion, astringents, and alteratives. To accomplish these objects we must employ all the improved means brought forward by modern investigation, changing and adapting them so as to meet the peculiarities of each case. First, then, secure rest by having the patient abstain from long-continued standing or walking, and from the excitement of coitus.

If the uterus is displaced, replace it, and sustain it in its normal position by the support of a well-fitting pessary.

To relieve pain and quiet the irritation, a vaginal or rectal suppository (made of extract of belladonna

and sulphate of morphia, one-eighth to one-half a grain of each with cocoa butter) used at bed-time, will often give great relief. Belladonna or stramonium, without opium, will answer in many cases.

I desire to call your attention specially to the next agent, namely, *depletion*, because I regard it as incomparably the most potent agent we possess. In making this statement, I am aware that I encounter much professional prejudice. Blood-letting has ceased to be the fashion of the day. The lancet is condemned as a "little instrument of mighty mischief;" few of the younger portion of the profession have ever seen a patient bled. Local depletion held its own some time after general venesection was, to a great extent, abandoned. But even this has gradually given way to the popular prejudice of the day. Nevertheless, the fact in surgical therapeutics remains true as ever, that the removal of blood directly from the vessels of an inflamed or congested organ is the most potent means of relief we possess, and in nothing do we see its virtues so signally displayed as in the treatment of *uterine disease*. Upon this point I speak with great confidence, for my observation has been large and varied.

Depletion is accomplished in various ways according to the effect desired. When menstruation is scanty and irregular, a leech applied to the cervix in a day or two after the flow has ceased will frequently relieve the engorgement, and, in time, establish the normal uterine function. But leeching should seldom be practiced more than once a month, and that soon after the menstrual flow. This should be followed by scarification at intervals of six or seven days throughout the interval between the menstrual periods. A number of very superficial incisions, made around the external or internal os, or both, will generally answer the purpose.

But when there is much swelling of the cervix there is no substitute for leeching or puncturing, as I shall describe hereafter. When menorrhagia is present, of course leeching is not to be thought of. Free scarification will then answer better, and may be resorted to soon after the flow stops. The incisions, in such cases, should be made from within the os internum outward. This will, in some cases, prevent a recurrence of the menorrhagia. If it fail to do so, it should not be repeated. *Persistent menorrhagia* indicates the existence of certain conditions of the mucous membrane of the uterine cavity which will not be relieved by depletion. In such cases dilatation with sponge tents becomes necessary. A succession of graduated sponge or sea-tangle tents must be employed, and in case of any undue irritation occurring in the uterus while this process is going on, the treatment should be interrupted till it passes off. The free distention of the cervix, thus obtained, enables us to get more exact knowledge regarding the state of the uterine cavity, and prepares the way for the use of astringents, or such other local treatment as may be required. The pressure of the tent is sufficient, in some cases, to reduce the swelling of the mucous membrane and lessen the circulation of the vessels disposed to bleed. Dilatation often reveals the fact that the mucous membrane is hypertrophied wholly, or in patches, looking as if exuberant granulations were sprouting up. A distended gland is occasionally found which looks like a miniature polypus. This condition is most promptly disposed of by the uterine *curette*. The instrument is carried up to the fundus and then carefully withdrawn, pressure being made at the same time so that the cutting edge shall hug or scrape the mucous membrane. This manœuvre is repeated until all irregularities of the mucous surface are removed. The *curette* which I prefer is that represented in the accompanying cut. The two sides of the triangle are rounded, so as to prevent the cutting portion at the upper end from going too deep. Such an instrument will only take hold of irregular elevations, and will slip over the smooth mucous membrane without doing any harm. Some pain and tenderness may be expected to follow this operation, but will require no treatment except a short period of rest. When the operation has been well performed, it seldom needs to be repeated. The menorrhagia due to the conditions just alluded to is promptly relieved by this mode of treatment. So far as my observation extends, the operation, if carefully made, is not attended with any great danger. No marked constitutional disturbance occurred in any of my cases, and the slight uterine tenderness soon disappeared. Few patients, however, require this kind of treatment; the majority get well under the use of astringents and alteratives. This brings us to the consideration of *intra-uterine medication*; and as this kind of treatment involves great danger at times, we must carefully note the conditions which are most conducive to safety.

The principal rules for our guidance are:—That intra-uterine applications should not be used until we have thoroughly tried and failed with other means;

The uterus should be in or near its normal position;

The cervix uteri should be sufficiently dilated to allow the fluid to escape from the cavity of the body;

Such a syringe should be used as will aid in effecting a free reflux or regurgitation;

The injection should be made *very slowly*, because the uterus will not tolerate rapid distention;

The blandest fluid ought to be tried first, in order to test the tolerance of the uterus;

And no agent whatever should be used which might *permanently injure the mucous membrane*.

In some cases the canal of the cervix is sufficiently open to permit the application of intra-uterine treatment; but it is often necessary to produce dilatation as a preliminary step. You will find the sea-tangle tent very useful for this purpose; better, I think, than the sponge. It dilates more slowly, causes less pain, and does not produce so much irritation of the mucous membrane as the sponge tent. Drs. Peaslee and Kammerer employ bougies for dilatation; but I have not been fortunate in using them, and cannot, therefore, recommend them. In order to carry the bougie through the canal some force is necessary, and to counteract this the uterus must be firmly held with forceps or tenaculum; and, with your pushing and pulling, you inevitably cause pain and bruise the tissues—at least that is my experience. The sea-tangle is easier and safer, and I therefore prefer it.

Now, having opened a free passage to the uterine cavity and back again, we have to consider what medication we shall carry into it, and how? Well, we may inject the chosen medicament by some form of syringe, ordinary or extraordinary; or we may ingest the same by means of a swab, hair-pencil, probang, Dr. Miller's lint pledgets, or some such vehicle. You will find injection the most convenient, the most thorough, and, if you are careless, the most *dangerous*. The danger can be avoided in great measure, by the observance of the rules already given. To facilitate the injection and subsequent outflow, many devices have been offered to the profession. Gantillon uses an ordinary syringe, having the tube pierced with holes directed backward towards the operator. Dr. Nott, of New York, has constructed a catheter, which I believe is very good. I have found the syringe used by me to answer nicely. The tube in the centre

through which the fluid is injected is very small;—parallel and external to it, are four grooves which afford an ample outflow.

With this instrument the uterine cavity can be injected—in most cases requiring it—very thoroughly and without causing severe pain.

We are indebted to Dr. Peaslee for some valuable hints guiding us to safe methods of intra-uterine medication. He shows that the tolerance of the uterus is quite variable, and that careful trials of injections or ingesta of the least irritating character ought to be made before resort is had to any powerful or irritating application. He would have us begin with salt and water as being most like the normal secretion of the mucus membranes. When that is well borne, some astringents may be tried. Previously, however, the canal of the cervix must be cleansed of its secretion. Some authors direct that the cavity of the body be cleansed also, but I am sure that, as a rule, you will find but little secretion there. The tenacious secretion, to say the least, is limited principally to the canal of the cervix. The agents to be used vary according to the conditions. In menorrhagia, when we desire to arrest the bleeding, I prefer the salts of iron,—the subsulphate being the best. The *Liquor Ferri Subsulphatis*, either of full strength or diluted, is a favorite with many. I generally use the powder, rubbed up with simple cerate and olive oil, after this formula:—

℞.

Ferri Subsulph Ex sicc.....ʒj.
Cerat Simplic.,
Olei Olivæ.....āā ʒss.
M.

About one-third of this, or much less, according to the size of the cavity, may be used at a time. An ordinary urethral or uterine syringe will answer every purpose, care being taken to inject as slowly as possible. Iodine may be employed in the same way, using the "iodine ointment" sufficiently diluted with oil to make it flow through the syringe. I claim for these applications that they are less liable than more limpid fluids to enter the oviducts; and, as they act slowly, they do not produce shock or violent uterine colic. Pain is usually set up after a time; but not of that alarming character which is sometimes observed to follow injections of caustic fluids.

When the object is simply to relieve hyperæmia, or subacute inflammation, the mildest astringents or alteratives will answer all the requirements. A saturated solution of the chlorate of potash, or ten grains of borax to the ounce of water, may be used with the reflux syringe. Weaker solutions than these will prove beneficial, and will be borne when the stronger might cause pain.

If the reflux is perfect, and no distress is experienced by the patient, the injections may be continued for three or four minutes at each application. Nitrate of silver, sulphate of copper, sulphate of zinc, and chloride of zinc may also be used; but I urge you not to employ more than a grain and a half of either of these to an ounce of water. If you begin with a stronger solution you run a good deal of risk; whereas with a mild preparation you can feel your way, and continue the application till you get the desired effect, or until you make sure that you have thoroughly bathed the entire mucous membrane. Whenever any of the stronger preparations are called for, I prefer to use them, as before stated, in the form of unguents.

You will usually succeed in relieving hyperæmic and inflammatory diseases of the body of the uterus by some form of the treatment already indicated; but troubles in the cervical walls will be more incorrigible. Long after the establishment of regular and normal menstruation, and the disappearance of all the signs and symptoms of disease in the cavity of the body, you will have to continue waging battle with the hyperæmia of the cervical mucous membrane, the consequent leucorrhœa. To overcome this, scarification, as already described, should be practised once a week. If there is much swelling and congestion of the cervical walls, a few punctures made around the os with the point of the scarificator will answer a very good purpose. This practice is highly commended by Dr. M. S. Buttles, of New York, Dr. John Scott, of San Francisco, and others. I think it holds an intermediate position between leeching and scarification of the mucous membrane; it gives us more depletion than the one, and less than the other.

When all evidence of congestion has disappeared, and nothing of the disease remains except hyper-secretion or leucorrhœa, then some special application to the cervical mucous membrane is indicated. Of the many agents that have been tried for this purpose, the nitrate of silver has stood the test of time better than any other. My observations, while acting as assistant to Prof. Chapman some years since, fully impressed me with the value of this article. He applied it in solution (30 to 40 grains to ʒj.) about once a week. I am satisfied, however, that a weaker solution, say 15 or 20 grains to the oz., will answer just as well. Sulphate of zinc in a solution of 2–4 grs. to the oz. is also useful. Many other articles may be used, such as tr. iodine, tannin, sulphate of copper, sulphate of iron, acetate of lead, carbolic acid, etc.

Before using any of these applications to the cervical canal, care must be taken to remove the tenacious secretion, so that the medical agent may come in direct contact with the mucous membrane. If this is neglected, the medicine used may be neutralized by the secretion, and do very little, if any, good. The reflex catheter, already described, will accomplish this; carry the instrument up to the internal os, and inject warm water freely; this will wash out the secretion, and leave the mucous surface clean and ready for the application.

Various modes of making applications to the cervical canal are practised. Wrapping a piece of new cotton around the point of a probe or piece of whalebone, a swab is thus formed, which, being dipped in the agent to be used, is carried along the canal. Brushes of various forms have also been used. The objection to these instruments is, that you cannot carry enough of the solution into the canal with the swab or brush at *one application*, and, if you use it again and again, you are likely to cause irritation of the mucous membrane. They also get soiled, and do not answer for more than one or two applications. I much prefer a glass rod of small size well rounded at one end, and curved like a uterine sound. To the other end a small rubber bulb is attached. By compressing the bulb or little bag the air is exhausted, and by dipping the open end into the solution to be used, enough will be drawn up for an application. The tube is then carried up to the internal os, and by pressing on the rubber bulb the fluid is gently injected into the canal.

I usually keep a number of these glass tubes on hand, bent at various curves to suit different cases. These tubes answer perfectly well, and the only objection that can be raised against them is that they are easily broken; but they cost very little, and can be replaced more conveniently than a swab or brush.

These applications should be made about once a

week, care being taken not to employ this kind of treatment immediately *before* the time for menstruation.

It is well to suspend all local application for four or five days before menstruation, lest that function might be deranged by the treatment. On the second or third day after the menstrual flow stops, the treatment should be resumed.

After all evidence of disease has gone, the patient should still be kept under observation for a time.

About a week after each of the two or three succeeding menstrual periods, an examination should be made, and if any return of leucorrhœa is observed, an application should be employed.

During this treatment of the uterus some attention to the vagina and vaginal portion of the cervix may be necessary. When vaginitis accompanies the uterine disease, it should be treated according to the directions given on a former occasion.

The mucous membrane around the os uteri, when denuded of its epithelium and presenting an appearance resembling a granulating ulcer, should be managed similarly to the lining membrane of the uterine cavity. The papillæ of the mucous membrane around the os should be scarified thoroughly once a week until the hyperæsthesia is relieved. Daily injections of water in large quantity is very efficacious in all such cases. Not only will it relieve the congestion and irritability of the mucous membrane with which it comes in contact, but it will, if used *very hot*, produce the same effect on the uterus, and indeed on the whole pelvic contents.

Hot water, when persistently applied, is one of the most valuable antiphlogistics which we possess, and may be used with marked advantage, not only in the uterine disease now under consideration, but in all other affections of an inflammatory or hyperæmic character. The best result is gained from its use in hospital, when it is used by trained nurses; but by instructing your private patients how to use it, they can accomplish much by it.

Place the patient in a horizontal position, with the pelvis slightly elevated; put a bedpan under her to receive the water as it flows away; then, with a Davidson's syringe, inject gradually a large quantity, say a gallon or two at a time. I direct my patients to begin with lukewarm water and increase the temperature every day until they get it as hot as they can comfortably bear it. I find that, in time, they will use a temperature of 108 to 110°, and experience great relief from pelvic symptoms.

It is claimed by some, who use water in this way, that it first produces an increase in the congestion of the vagina and the vaginal portion of the cervix; but, after continuing the applications for a time, the blood-vessels contract, the circulation in the part is increased in activity, and hence the hyperæmia is relieved.

Water alone is all that is necessary as an injection in most cases of endometritis: but when there is vaginitis, the water should be medicated. Among the many agents recommended you will find borax will answer more generally than any other— ℥ j.— ℥ iij. to a quart of water answers very well. When there is much relaxation of the vagina and mucous membrane of the lips of the cervix, a solution of alum should be used occasionally. Dr. J. Marion Sims uses, for a similar purpose, a roll of cotton saturated with glycerine, which is introduced into the vagina and changed daily. This answers admirably in many cases; the cotton keeps the inflamed surfaces apart, and the glycerine causes free secretion, or possibly exosmosis from the mucous membrane, which, by that form of depletion, relieves the congestion. The same authority commends the use of a concentrated extract of *pinus canadensis*, to be used in the same way as the cotton and glycerine. I have had no experience with this agent, and can therefore say nothing about it.

There are many points in the treatment of uterine disease which yet remain to be considered; such as the local use of iodine, mercury, cupping, blistering the cervix, electricity, etc.; but these agents are of most value in the management of other forms of uterine disease, and may be omitted in the consideration of the therapeutics of *endometritis*.

Newark Medical Association, N. J.—This Association has elected the following officers for 1873: *President*, Charles Young, M.D.; *Vice-President*, R. M. Sutphen, M.D.; *Secretary*, Aaron K. Baldwin, M.D.; *Treasurer*, J. A. Cross, M.D.

Graefe.—Appleton's Journal is responsible for the following: The late Dr. von Graefe, the renowned German oculist, leaves in his posthumous papers the remarkable admission that he frequently performed dangerous operations when he despaired of success, merely to gratify the patients and their relatives.

New Lying-in Hospital.—On the 1st of January, 1873, a new Lying-in Hospital was established at the West End, Boston, Mass. The medical officers are Drs. Francis Minot, John P. Reynolds, and Chas. E. Buckingham, *Consulting Physicians*; Drs. Henry Tuck and Wm. L. Richardson, *Visiting Physicians*.

Reports of Hospitals.

BELLEVUE HOSPITAL, N. Y.

NOTES OF PRACTICE, AND PECULIARITIES OF TREATMENT.

The following items are not without interest to such as are debarred the opportunity of visiting our metropolitan hospitals, and informing themselves of the small matters, the knowledge of which is often the turning-point in the treatment of the most important cases.

In the present article Bellevue Hospital is selected as the institution to furnish material for notes; at a future time, and as opportunity offers, we shall give the results of our visits to similar charities in this city, and do our best to give everything of practical value which may offer itself.

MODIFICATION OF THE PLASTER-OF-PARIS SPLINT.

There has been recently devised a modification of the plaster-of-Paris splint. It consists in laying strips of tin or wire gauze, about three-fourths of an inch in width, lengthwise of the limb. The flexibility of these strips is such that they readily accommodate themselves to any unevenness upon the surface, and yet strongly resist any lateral displacement. The advantages derived from these strips are, that an equally firm splint is obtained as when the plaster alone is used, and a very much lighter one; and that the morals of the juniors are so much the less liable to be perverted by not being obliged to cut through so heavy a covering when it is desirable to remove the fixed apparatus.

SKIN GRAFTING.

This has come to be an ordinary method of restoring cutaneous covering to extensive ulcerating surfaces. In transplanting the little grafts, it is said to

be necessary that they should be cut of such size and thickness as to prevent their turning up at the edges. To prevent the eversion of the edges the pieces are cut small and thin, embracing scarcely more than the epithelium, and very often the most successful grafts are those which are removed from the healthy flesh without producing hemorrhage.

ULCERS.

The old, chronic ulcers, with indurated edges, are sometimes immensely benefited by making numerous free incisions through their indurated tissues, even down to and through the periosteum, if that structure is thickened. This is followed by firm strapping with adhesive plaster. The result is a reduction of the congestion which has long existed in the parts, and the production of an alterative action in the tissues, which renders them more healthy. Some wonderfully obstinate cases are cured by this method of treatment.

DROP WRIST.

A case of "drop wrist" has been under treatment by the use of galvanism and hypodermic injections of strychnia—$\frac{1}{75}$ of a grain of the sulphate twice a day. This patient had received various kinds of treatment before his admission to the hospital, but without benefit. The ordinary iodide of potassium treatment has given him no relief whatever, but from the date of the commencement of the treatment by the use of the strychnia and galvanism, he began to improve rapidly.

TAPPING FOR THE RELIEF OF TYMPANITES.

A poor fellow was suffering with his abdomen immensely distended by gaseous accumulation. It was proposed in his case to tap the colon with a fine needle, convenient for the purpose, and thus permit the escape of the gas. The needle of the ordinary hypodermic syringe could be easily used for this purpose. The operation is not regarded as a new one, and is not disapproved of by the visiting physician. It is said to be simple in its nature, easily performed, and unattended by serious results.

TREATMENT OF PNEUMONIA.

A large number of cases of pneumonia this season are complicated by bronchitis. This complication is quite uniform, and with it is associated an alarming fatality.

The treatment which cases of pneumonia receive in this hospital varies somewhat. With some, the favorite method of treatment is by the use of quinine from the beginning, in 10 gr. doses three times a day.

The particular idea entertained in relation to its effect is, that it is anti-cell-producing that it, diminishes the amount of cell material effused into the air-vesicles in the progress of the disease.

Some cases receive no quinine at all, and have whiskey altogether. One man, who had been brought in with the bronchial complication, was in a condition that demanded the immediate and free use of stimulants, and under their administration he was getting well.

The general principles of treatment, however, are to reduce the pulse and temperature and give tonics and good diet. To reduce the pulse, aconite is more commonly used than veratrum viride. Fleming's tincture is a favorite preparation. If the temperature rises to 102° or 103° means may be employed to reduce it. In many cases simple sponging is sufficient, and gives the patient much relief.

Quinine is believed to have the power of reducing the temperature of a fever, and is used with this end in view, as well as the one already mentioned. When given, it is in full doses, whichever may be the object. The oil-silk jacket is not much resorted to, being of doubtful efficacy.

SCIATICA.

Some cases of this disease which had resisted a variety of treatment—such a variety as a patient is liable to receive who has been afflicted with the malady for three or four months, and gone from one doctor to another—were cured, *almost at once*, by the hypodermic injection of morphine over the seat of pain, plunging the needle deep into the tissues, perhaps to the depth of one or one and a half inches.

TREATMENT OF ACUTE ARTICULAR RHEUMATISM.

The alkaline treatment is the one usually employed in the treatment of this affection. Local applications to the joints are not much employed. Sometimes the joints are wrapped up in cotton; sometimes nitrate of potassa is sprinkled into the cotton before it is applied; and sometimes anodyne lotions are employed. The patients receive opium sufficient to allay pain and secure rest.

The presence of chorea as an intercurrent affection in cases of rheumatism, was noticed in two cases.

The opinion has been expressed by some distinguished clinical teachers and writers, that there is a pathological connection between the two diseases; and one writer has published a monogram in which he produces a large number of cases in support of his theory. Some of the prominent clinical instructors here advocate this doctrine, while others regard it as a view which can hardly be sustained.

PLEURISY WITH EFFUSION.

These cases are treated regularly by the use of diuretics. The use of counter-irritation seems to be regarded either as conditional or non-essential. While the inflammatory action exists in its subacute form, blisters are recommended to subdue it. Some patients are up about the wards who have a pleural cavity filled with fluid, are receiving their diuretics, good diet, and that is all.

Some of these cases amend by the use of diuretics alone, some by the addition of counter-irritation, and some only by the addition of paracentesis. With some men this is *the* plan for removal of the fluid. There is one thing to be said concerning this operation, which is practical; that is, when a pleural cavity is very full of fluid, it is very beneficial in many instances to tap at the *beginning*, and remove a portion of the fluid, for by so doing the absorbent vessels may be so relieved from pressure that they will go to work under the influence of diuretics and accomplish all that may be desired; whereas, without this operation, they would have been able to accomplish but very little. In one patient five pints of fluid were drawn off, when he was placed upon acetate of potassa and the use of counter-irritation in the shape of blisters, and there was soon a manifest improvement in his case. When he was first admitted his left chest was completely filled with fluid.

A very fashionable method of removing fluid from the pleural cavity, and other closed cavities, at the present time, is by the use of what is known as the aspirateur (Dieulafoy's).

The briefest definition of the instrument which I have heard is that "it is an instrument acting upon nearly the same principle as the stomach-pump, and costing sixty dollars."

This instrument was very successfully used a few days since for the removal of the urine from the bladder of a patient who was suffering from retention on account of a traumatic stricture.

A fine trocar was plunged into the bladder about one inch, the bladder being distended above the pubes in the median line, the aspirateur attached, and twenty ounces of clear water drawn off, to the great relief of the patient. This operation was repeated, and thus the patient was placed in a much more favorable condition for the subsequent operation for the relief of the stricture, than he otherwise could have been had he not been relieved in this manner. The operation for removing fluids from such closed cavities are nothing very new, but the aspirateur is said to be a most excellent assistant in carrying out the operation.

NIGHT SWEATS OF PHTHISIS.

For the relief of this exceedingly troublesome symptom in this disease, a comparatively new remedy is being used somewhat.

It is the sulphate of atropia. Some of the patients are taking $\frac{1}{60}$ of a grain in solution *ter in die*; some are taking $\frac{1}{100}$ of a grain at bed-time, and all are giving very good results.

The success in this direction has already been sufficient to entitle it to a trial at least.

A very excellent plan of managing these night sweats is also practised, which consists in sponging the patient with hot water, as hot as they can comfortably bear.

If a patient is found sweating profusely in the night, take him out of bed, sponge him thoroughly with hot water, wipe him dry, replace his flannels, and put him back to bed.

Sometimes a single sponging will arrest the sweating for two or three days.

TAPE-WORM.

Many remedies have been vaunted as being exceedingly efficacious in ejecting this most troublesome partner. Without doubt the success attending the administration of any remedy depends very much upon the method in which it is administered. A patient here has been treated in the following manner with success. The remedy used was the Male Fern.

℞. Liquid Ext. Male Fern,
Syr. Gum Arabic, āā
M.

The patient took nothing for supper, and in the evening took a full dose of castor-oil. In the morning she took no breakfast, but took a dessert-spoonful of the mixture, and repeated it every four hours until an effect was produced upon the bowels, or the stomach ceased to tolerate it.

In general, the remedies for the removal of this parasite are to be taken fasting; and doubtless in many cases success has been denied on account of a want of specific directions in regard to manner of employing the remedy employed.

NITRATE OF AMYL.

This is a remedy which is used somewhat for the relief of dyspnœa. An old lady, the subject of emphysema and chronic bronchitis, has her vial of amyl upon her stand, and when she feels her attacks of dyspnœa coming on, she allays them very readily by dropping a few drops upon some lint—5 is the usual number directed—and inhaling it.

It is of benefit in the dyspnœa of bronchial asthma, the dyspnœa of that peculiar grouping of symptoms which go to make up angina pectoris, and dyspnœa form any similar cause.

GALACTO-POETICA.

The following mixture was administered t. i. d. to promote the secretion of milk:

℞ Tr. Ferri Muriatis gtts. x
Potassæ chlorat. grs. x.
M.

This prescription was witten for a patient who had been suffering from pelvic cellulitis, accompanied by a marked diminution in the quantity of milk secreted.

Progress of Medical Science.

OBESITY A CAUSE OF DISEASES OF THE FEMALE SEXUAL ORGANS.—According to H. Kirsch, of Prague (*Centralbl. f. d. Med. Wis.*, No. 34), diseases of the sexual organs in women are not unfrequently dependent upon the presence of an abnormal amount of adipose tissue. He bases his assertion upon the examination of 215 stout women. Of these, irregularity in the menstrual function presented itself in 208; and of these, 146 had leucorrhœa, 116 complained of scanty menstruation, and 56 of chronic metritis; 47 suffered from hysteria, 48 were sterile; 39 exhibited anteflexion and anteversion of the womb, and 11 retroflexion. The writer avers that most of these affections improve without further treatment when the obesity has been made to disappear. A course of diet somewhat like that advocated by Banting, combined with a moderate use of the waters of Carlsbad and Marienbad, is recommended.

THE LYMPHATICS OF THE SKIN.—Dr Neumann, of Vienna, has been making a careful study of the lymphatic system in the skin, and has arrived at the following conclusions:—

1. The lymphatics of the skin may be regarded as a system of closed tubes, whose walls are independent of the surrounding tissues, and are lined internally with flattened epithelium; these tubes have no orifices whatever, and consequently do not communicate with the so-called serous canaliculi, or any other similar network in the interstices; no openings exist between the epithelial cells, not even when the vessels have undergone pathological changes.

2. Of the blood and lymphatic capillaries, the former are always nearest the surface of the skin; in the deeper parts of the cutis, the branches and networks of each system intercalate with one another in an intricate way. No invagination of one lymphatic vessel within another was observed.

3. In the two series of lymphatic networks that exist in the cutis, the deeper one is made up of broader and stouter vessels. No valves or stomata are found in this situation, though in the subcutaneous tissues they occur occasionally. Lymphatic tubes or loops are supplied to the papillæ.

4. The sweat-glands, hair-roots, and follicles are furnished with lymphatic capillaries. The fat lobules are similarly provided.

5. The distribution of the lymphatics varies in the different parts of the body. They are most numerous in the labia majora, scrotum, palms of the hands and soles of the feet.

6. Sometimes dilatation of these vessels is observed in parts that have undergone pathological change.

7. In ulcerative processes, when lymphatics are destroyed, they may be regenerated; when observed in cicatricial tissue, they are diminished in size.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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

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THE ALUMNI ASSOCIATIONS, AND THEIR INFLUENCES FOR GOOD.

It is only within the past few years that the alumni of our different medical colleges have claimed for themselves any existence in fact. From originally small gatherings, these organizations have so increased that active members are scattered all over the country, and will travel scores of miles to attend the stated reunions. There are many reasons why we should congratulate ourselves on such a state of things. Aside from the good which these meetings do to the members, individually and collectively, in affording opportunities for social enjoyment and professional encouragement, there is much more that can be done for the colleges, and through them for the educational interests of the profession at large. It must not be denied that the alumni associations are becoming foci of immense power and influence; that they are capable, by the very circumstances of their formation, of creating a healthy professional sentiment for reform which could not be done by any other means. They can in reality be the powers behind the throne, and, if they make proper use of their opportunities, can insist upon changes in the schools, which in the end will redound to the credit of all interested parties. The college must be poor indeed which, after an existence of a score of years, cannot count among its graduates men who have by sheer diligence risen to the front ranks of their profession—men who have obtained for themselves positions which, if their former teachers care not to envy, they must at least respect. These successful men are earnest in their endeavors to lessen those difficulties in their successors which their own hard-earned experiences have verified—they are actuated with the commendable disposition to prepare the future generations of medical men to combat these obstacles more successfully. In such a work they can afford to be independent of mere selfish considerations, with perhaps the single exception of a jealous pride in the success of their alma mater.

The alumni should always have a special influence with their alma mater on this very account. They must be presumed to be the best friends to their own college. There is no element but partiality towards an institution from which they have received their diplomas, and all the suggestions for reform should be so considered by the faculties. If the associations are outspoken in their convictions as to what is right, their opinions should receive all the weight which this acknowledgment of friendship to the governing powers should entitle them.

Already we have had evidences of their influence with their respective teachers. On more than one occasion these very associations have taken up the discussion of matters pertaining to the colleges which even the faculties, from purely politic motives, did not dare to touch upon. They have borne the odium of adverse criticism with that independence which a conviction of being in the right alone can give, and have at last come off victorious, generously sharing the palm with a misguided but repentant faculty. Not only can the alumni of any institution step in at times to maintain a good name, but they are able and willing to increase the reputation and usefulness of these seats of learning. It is within their power to do for a college what it may in a pecuniary sense be incapable of doing for itself. In the shape of endowments, for instance, it can give a practical turn to the suggestions for reform in the shape of extra professorships, increased time for study, and the like, which assistance we can never expect to gain from any other quarter. In more than one of our colleges the initiative in this respect is already being taken with the promise of very gratifying results. This is one of the means to an end which gives us a pivot upon which to turn many of the time-worn suggestions of years past, and will give every one interested in educational matters a real and abiding interest in alumni associations. There are many other reasons why these organizations should prosper, but in our opinion this is the principal one, and if the alumni continue to take an interest in this matter the results cannot fail to satisfy the most sanguine. In order to smooth the way, however, we claim that the alumni association of each college should have a representation in the council: this is simple justice, and in many points of view the smallest possible compensation on the part of the faculties for the ultimate good to be attained.

The alumni associations of our colleges in this city are all in a prosperous condition—are, so to speak, permanent institutions. They number among their members some of the most influential men all over the country, men who know what is wanted in the way of reforms in medical education, and who are capable of

backing up their convictions in a practical manner. We cannot believe that when the proper time comes for initiating the necessary changes any one of them will be found in the background.

A RELIABLE METHOD OF INSURING PROFESSIONAL SUCCESS.

At the time when a large number of fresh doctors are thrown upon the tender mercies of the world, and are in need of advice to insure their professional success, we are reminded of the method adopted by the late Valentine Mott, and which he was in the habit of repeating to his class. He would always advise them first of all to work hard, to thoroughly ground themselves in their profession; but he would say that they needed something more:—"With all this, gentlemen, you require a little *judicious pushing* in the crowd. When I commenced practice I was as bad off as any of you will be; but I made up my mind, after waiting a reasonable time, to push a little. I first tried my finger, I then thrust in my hand; next I got one elbow in, next my head, next the other elbow, and finally my whole body"—"and," with the characteristic shrug of his shoulder, his peculiar smile, and the expressive twinkle of his eye, he would say, "that is the way, gentlemen, I managed to get practice." We have no doubt that if every graduate has as good a preparation for this elbowing process as Valentine Mott he will meet with a like success. The attempt "to paddle your own canoe" is not so successful in the abstract as the poet would lead us to believe; few if any can make any progress, in a professional sense at least, without occasionally relying upon a *skull*.

INSANITY IN THE FRENCH ARMY.

We referred in a previous issue to the alarming prevalence of insanity in the French army. This fact is worth recording. It is established in a recent number of the *Annales Medico-psychologiques*, that not only is this dreadful disease on the increase, but that it is becoming more intractable to treatment.

Three forms of insanity flourish in that army: From 20 to 30 years, mania takes possession of the young soldier, reduced to despair by a mode of living without occupation or issues; from 30 to 40, melancholy eats up those whose sense of honor is broken by base obediences; from 30 to 40, general paralysis seizes upon the strongest organizations. The nervous system of those who have been raised to high commands becomes as constricted, from head to foot, by the constant imbibition of alcohol, as anatomical pieces are in a solution of bichromate of potash. By this continuous saturation they first deaden the feeling of remorse when killing their fellow-countrymen, and they gradually come to lose the feeling of their own natural functions (gâteux).

The asylums of Charenton, of Auxerre, of Nevers, of Armentières, of St. Trond, of Bordeaux, etc., are the hiding-places of these broken instruments of an odious policy, and will soon open their doors to receive those who fire, and those who command the fire upon the would-be communists, in the plain of Satory.

The statistics of these unfortunates is full of interest. We have said that the proportion of insane is greater in the army than among the other classes. The proportion of the cures of insanity is less among the military than among the other classes. The proportion of the deaths from insanity is greater among the military than among the other classes. The proportion of the insane is greater among the officers than among the privates. The predominance of general paralysis over the other forms of insanity is infinitely greater among the officers than among the privates.

Insanity, too, presents in the army an intensity of character which one is not used to observe in other classes. The military life, in France at least, is prolific of insanity.

To sum up: insanity in the army has been constantly increasing in the number of its victims, in the acuteness of its symptoms, in the gravity of its prognosis, and in its fatal issues, from 1838 to 1872.

In regard to *its causes*, the author of the article "De la folie chez les militaires," in the *Annales Medico-psychologiques* of July, 1872, expresses himself thus:

As for the causes, they have not been noted with exactness. Therein he can be readily believed; for the French physician for the insane, who would note with exactness the causes of demoralization and *déraison* of the army, would soon be *noted* too; and upon the report of one of his confrères—of the one, for instance, who invented the "folie des grandeurs et des persécutions"—he would be quickly transferred from the parlors of the Direction to the cell of a lunatic.

Of the causes of the insanity of the French military everybody knows, but nobody dares to tell them, for the simple reason that they have too much in them to regret.

Every year the strongest young men are taken away from the family influence and submitted to an implacable police, which breeds defiance among themselves, hatred for their free fellow-citizens, and makes them considert he ultimatum of shooting working-men as a rich sport—the reward of tedious garrison servitude. If their young blood boils at these teachings and prospects, make them drink; if they long for a useful employment of their time, force, or skill, let them smoke; if they grow conscientious and reflective about the immorality of their calling, and entertain the idea, dear to the young soldier, that some day they may use their arms in support of their country, lead them to shoot the rabble, their very brothers and sisters.

Who could be surprised that the first *impression* produced by this moral *pression* marks the soldier for suicide by despair or by mania, with its multiform de-

lusions; that the second impression, produced by the turpitudes of garrison life, brings on melancholy and suicide by depression; and that the third impression, swifter than old age, nails the unfortunate (altogether a victim and a culprit) in a motionless stupor, at which an idiot could laugh.

After this exposition of the moral and medical condition of the French army by a physician saturated with Bicêtrian sympathies, one can represent the French working-man as a Prometheus, chained and eaten up, yet covering the world with the products of force and genius; and the military as a bottle of absinthe, whose neck comes out of red trousers.

Reviews and Notices of Books.

A Hand-Book of Post-Mortem Examinations and of Morbid Anatomy. By Francis Delafield, M.D., Curator to Bellevue Hospital, Pathologist to the Roosevelt Hospital, etc., etc. New York: William Wood & Co., 27 Great Jones Street. 1872.

We have long been in need of a manual for post-mortem examinations. Our information on this subject has always been scanty, and could only be gleaned with great pains from the bulky volumes of Medical Jurisprudence, or the abstruse treatises on Pathological Anatomy. For these obvious reasons they are not accessible to the ordinary practitioner, nor do they supply exactly what he needs.

In the book before us, the author has aimed to supply this deficiency. In doing so, however, he does not enter very deeply into the medico-legal aspects of such investigations, nor does he describe very minutely the microscopic appearances of diseases, but reserves both these subjects for larger books. The greater portion of the work is taken up with gross morbid appearances, and they are described in such clear and precise language that they may usually be recognized by any ordinary observer.

In the first forty pages we are told of the methods for making post-mortem examinations in adults and young children. The thoroughness and system which the author urges cannot be too highly prized. This is the only way by which we can hope to contribute anything to this department of science. We should be extremely cautious in forming conclusions as to the amount of disease that may produce death, for we have no definite standard of comparison. In one case a mild attack proves fatal, while in another a much severer one is borne with impunity. There are many cases, too, in which the most careful examination fails to find any assignable cause for death.

The following two hundred and fifty pages are devoted to the morbid anatomy of the organs. In the third division of the book, the author discusses the lesions of general diseases and the results to be observed in death from drowning and poisoning.

He concludes with a short description of the tumors. The pathology of wounds, fractures and dislocations, and subjects especially connected with surgical pathology, are omitted.

Among the chapters that are particularly good are those on the methods of examination and on the lungs and kidneys. They are all very valuable contributions to our present knowledge. The latter deserves special commendation for its precision and conciseness. The classification seems the most simple and rational of which we know.

The nomenclature of the tumors is about the same as was proposed by Virchow, and is the one now generally accepted. It is based on the character and relations of anatomical elements, and this is doubtless the only safe standard. Changes will be introduced from time to time as our knowledge of histology increases, but they will not seriously affect the present system.

We are glad to be able to recommend this book very highly. The author has brought to bear a large amount of experience and a mind that is logical and acute in its reasoning, and he has furnished us with a thoroughly safe companion for pathological study.

The facts that are regarded as definitely ascertained are stated with force and perspicuity, though sometimes with an unpleasant abruptness.

There is no effort made to cover our ignorance on subjects that are still obscure. In discussing doubtful points, the author usually gives the views held by leading pathologists, but he avoids mere theories as far as possible.

We are glad that New York has taken the lead in labors of this kind.

Contributions to the Pathology and Therapeutics of Variola. A Report made to the Berlin Medical Association, Nov. 13, 1872. By Dr. W. Zuelzer, Physician to the Charity Hospital, and Tutor in the University. (Separate sheets from the *Berlin Klin. Wochensch.*, 1872.)

This memoir is based upon the study of 326 cases of small-pox, received into the Charity Hospital between July, 1871, and April, 1872. It is principally devoted, however, to the cases of pure hemorrhagic variola, which represent the most severe grade of the disease, and are to be carefully distinguished from certain forms of the confluent pustular variety, in which slight hemorrhages occur in the pustules. The true hemorrhagic variola has been described under many names. It is the black small-pox, or variola nigra of Sydenham,—the purpura febrilis et variolosa, the black death (Hebra), etc.

35 among the 326 cases were examples of this grave form of disease, in which the pustules were absent, and replaced by cutaneous hemorrhages. The patients were generally robust, well nourished persons, in good hygienic conditions,—only 7 acknowledged alcoholic habits. The disease began suddenly with a severe chill, followed for two or three days by headache, pain in the loins and limbs, vertigo, insomnia, vomiting, and a diffused scarlet coloration of the skin more suggestive of scarlatina than of small-pox. The fever was moderate, an important circumstance for the prognosis. In only 6 cases did the temperature reach 40° (Cent.)

On the 3d or 4th day appeared the phenomena connected with diffused hemorrhages. The skin became swollen, principally at the face, and the erythematous blush spread further, and assumed a darker hue, often violet, in many cases black. Maculæ and petechiæ appeared,—not raised above the level of the skin,—with here and there vesicles filled, not with pus, but blood. The mucous membranes changed color with the skin,—hemorrhage as a rule making its first appearance in the subconjunctival connective tissue, that swelled and formed a prominent ring around the cornea. At this stage the appearance of the patients was frightful; the face darkened and swollen, the

eyeballs staring, with lurid red conjunctivæ, the entire expression in the highest degree anxious.

On the 4th or 5th day, rarely earlier or later, occurred profuse hemorrhages from the nose, urinary passages, vagina, rectum, lungs, sometimes also from the stomach, which lasted till death, and could be arrested by no kind of treatment. The temperature then fell, even below the norme; the heart and pulse were more rarely affected.

The organs of circulation, however, presented characteristic conditions throughout the disease. The cardiac impulse was powerful and heaving,—the sounds loud,—the pulse less frequent, full and hard. The arterial wall was very resistent: the veins, frequently observed in operations for venesection or transfusion, were incompletely filled, but their walls so stiffened that after section they often remained gaping and extremely friable. Nearly all the patients complained of præcordial anxiety and intense pain about the heart.

The respiration frequently presented curious irregularities of rhythm; being interrupted from time to time by a complete pause, this followed by a succession of shallow respirations, that gradually deepened to dyspnœa;—then came the pause again.

Nervous symptoms were prominent. Hyperæsthesia of the skin, or anæsthesia, paralysis of one or more of the limbs, deafness or amaurosis, were observed in various cases. The consciousness was usually intact, but sometimes coma set in a few hours before death.

Multiple hemorrhages were the principal lesions discovered at the autopsy. These were found constantly in the cutis and subcutaneous connective tissue, the respiratory and intestinal mucous membranes, the parenchyma of the lungs, the voluntary and cardiac muscular fibres, the sexual organs, and in the sheath of the great nerves. This last locality explained many anomalous nervous symptoms, especially the alteration of the respiratory rhythm, by hemorrhage around the vagus. The cardiac neuralgia was similarly explained, since, according to the researches of Goltz, the heart receives its sensitive nerves from the vagus.

These symptoms and lesions appear at first sight to remove the hemorrhagic variola very far from the confluent pustular small-pox.

But cases of the first only occur during epidemics of the second variety, and may communicate that second form by contagion. There are, besides, many cases that establish intermediate degrees between the two.

The author recalls the microscopic researches of Auspitz and Basch, Ebstein and Wagner, on the formation of the variolic pustule, which was shown to be an inflammation of the derma, and then inquires into the cause of this inflammation. This is evidently some specific chemical irritation, which the author thinks is unquestionably due to the presence of Bacteria. Certain form-elements have long been noticed in the pustule, that appeared to possess a definite relation to the morbid process. The first observations were made by Gluge in 1838. They have been extended by Hallier, Keber, Klebs, and Wagner. Of great importance for the author's thesis in regard to the essential identity between confluent and hemorrhagic variola is the fact, that these same elements have been discovered in the corium in cases of the last disease, by Erismann, Weigert and himself. Finally, Cohn (Virchow's Arch, 1872) has demonstrated that these "form-elements" are really Bacteria, which, in the fresh lymph, appear as extremely small, granular, colorless corpuscles, possessed of molecular but not independent movements.

The resemblances and differences between pustular and hemorrhagic variola are explained by the different situations of the bacteria in the two cases, as actually demonstrated by the microscope. In the first form they are found in the lymph of the pustules; in the second are accumulated in the terminal arteries in masses of sufficient size to constitute emboli. At the same time the walls of the arteries are found to be in fatty degeneration. The two conditions together explain the hemorrhages. Moreover, this extensive formation of emboli implies that an enormous excess of Bacteria exist in the blood in the hemorrhagic small-pox, and this excess corresponds to the singular fatality of this form of the disease.

The author lays no stress upon the decomposition of the blood which must also exist in these cases, and which is evidenced by the rapid march of fatty degeneration in the arteries. He utilizes the facts above related, in some interesting explanations in regard to certain details of the hemorrhages; *e. g.*, their absence in the liver and spleen, and their first appearance on the face and especially the forehead. Leaving these points from want of space, we will dwell in conclusion upon the author's remarks on the therapeutics of this frightful Disease.

After pointing out the unsatisfactory results obtained from ordinary treatment, he selects three substances as alone responding to the antiseptic indications that must be the basis of all rational treatment in all forms of small-pox. These substances are benzol, toluol, and xylol.* The benzol is extremely diffusible, and rapidly eliminated from the lungs. The toluol and xylol become oxidized in the blood, the first to hippuric, the second to toluric acid—the last more difficultly decomposed. It is on this account preferred by the author. Doses of 10-15-20 drops are given in a mucilaginous potion with essence of peppermint and sherry-wine.

The most essential result of this treatment, freely employed in pustular variola, is a coagulation of the contents of the pustule. If a pustule be opened after several days' treatment, the base seems to be covered with a solid fibrinous deposit, which often forms concentric layers (the débris of dead Bacteria?).

Hence the pustules rarely burst, and the period of drying is hastened and freed from complications, especially those of purulent absorption. Very little influence was exerted on the temperature.

The author only speaks of the application of xylol to pustular small-pox. We can only infer the theoretical utility of its administration in the initial stage of the variola hemorrhagica, as an attempt to diminish the number of Bacteria in the blood, that otherwise so soon become overwhelming.

It is to be regretted that this very interesting memoir does not contain more details and statistics in regard to the results of a treatment yet under litigation.

The author states in the beginning that of the 53 patients of the third grade (confluent pustules), he lost 9, or 16.1 per cent.

RESPONSIBILITY AND DISEASE. BALFOUR BROWNE, Author of Medical Jnrisprudence of Insanity; Law of Carriers, etc. London: Baillière, Tindall & Co. 1873.

THIS essay is written for the purpose of demonstrating that the scientific difficulty of establishing the precise limits between sanity and insanity is no practical excuse for not enforcing a local distinction between them. It is principally intended as a reply to a paper by Dr. Rns-

* See also Burkhart. Ueber die Anwendung des Xylol bei Pocken. Berlin. Wochensch. 1872.

sell Reynolds, who recently, before the British Medical Association, has declared:

1st. That delusion constitutes no criterion of insanity. 2d. That consciousness of right and wrong is equally unreliable. 3d. That the doctrine of partial insanity is untenable. In regard to the first statement the author declares that the law does not regard delusion as a test of insanity, and "does not define insanity, *except* in so far as it exempts the individual afflicted with it from punishment." But it is not made clear, by Mr. Browne at least, how the law performs its duty of "practical interpretation," in regard to this important exception, which is the whole case at issue.

The author replies to the other two objections together, asserting that the existence of moral consciousness in regard to some subjects and not to others, where there is intellectual delusion, is itself a clear proof of the possibility of partial insanity. Whatever be the scientific definition of monomania, it is extremely important, practically, that those affected merely with a slight mental aberration be left in enjoyment of the majority of their rights for which they are fit.

Mr. Browne concludes that the present law in relation to insanity is not nearly so bad as enthusiastic psychologists would have us suppose, and that accurate scientific tests are unnecessary for practical decisions based on averages and probabilities.

ARCHIVES OF SCIENTIFIC AND PRACTICAL MEDICINE. Edited by C. E. BROWN-SÉQUARD, assisted by E. C. SEGUIN. No. 2. February, 1873.

WE were accidentally prevented from noticing the first number of Dr. Brown-Séquard's journal, and of congratulating the profession on the valuable accession to our periodical literature, coming to us under such distinguished auspices. We should be sorry that the second number should meet with such apparent discourtesy at our hands. No. II. is not inferior in interest to No. I., for although the papers are not numerous, they contain a good deal of original matter, and are eminently suggestive, even when not comprehensive. We think, however, that Dr. Neftel, in his article on the Diagnosis of Cancerous Diathesis, seems to lay rather undue claim to originality for the statements "that malignant tumors, for instance carcinoma, are of local origin," and that "the prognosis depends upon the circumstance whether the affection is still local, or has already become generalized." We believed this principle to be universally admitted; it is enforced with emphasis in Broca's recent treatise on tumors. Dr. Neftel, however, renders service in pointing out the presence of indican in the urine as a sign of hepatic cancer, and quotes three cases where this sign served as a basis for a correct diagnosis, though no tumor could be detected. He does not prove, however, that the cancer is the exclusive condition that causes indican to appear in the urine, or that other profound disorders of nutrition would not have the same effect. The assistant editor, Dr. E. C. Seguin, contributes some interesting cases of a peculiar form of disease, called by him Tetanoid-Pseudo-Paraplegia. The paralysis is dependent on tonic spasm of muscles of the lower limbs, and is caused by compression of the anterior part of the spinal cord. It is an affection analogous to spinal epilepsy and writers' cramp.

Another interesting paper is by Dr. Bulkley on the use of tar in various skin diseases. There is a short article by Dr. Dupuy on a new method for arresting headache by means of injection of carbonic acid gas into the pharynx, and description of an apparatus devised by him for this purpose, accompanied by a drawing by which the instrument could be imitated. We have, besides, a very interesting review by Dr. Francis Delafield, on existing theories in regard to the origin of cancer, principally those of Thiersch and Waldeyer, who trace carcinoma exclusively to epithelial cells, and a little paper by Dr. E. Seguin on family thermometry in scarlatina. But the most important features of the number are the three articles by the Editor himself. The first is on the mechanism of symptoms in diseases of the brain, in which these symptoms are traced to irradiated irritations, essentially similar to those that occur in peripheric disease. The second exposes facts showing that hemiplegia may exist on the same, as well as the opposite side of lesions in the brain or medulla. The third article is on the production of ecchymoses as a consequence of cerebral lesions. The translations, reviews, and analyses fully justify the promise of the prospectus. It is with the greatest pleasure that we witness the establishment of this American archives, for which a wider place than usual has just been created by the cessation of Dr. Hammond's *Psychological Journal*. We trust that it will become a worthy rival of the scientific archives now in course of publication in Paris, and of which Dr. Brown-Séquard still retains supervision.

MENDENHALL.—Dr. Geo. Mendenhall, of Cincinnati, Ohio, now at Wiesbaden, has been elected a Fellow of the Royal Obstetrical Society of London.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, Dec. 11, 1872.

DR. A. L. LOOMIS, PRESIDENT, in the Chair.

DR. DELAFIELD presented a specimen for a candidate.

DR. FINNELL exhibited a specimen of gunshot wound. The immediate cause of death was a pistol-shot wound of the right auricle and left ventricle of the heart.

PRIMARY CANCER OF THE MEDIASTINUM, ETC.

DR. JOHN A. LIDELL presented a specimen of primary cancer of the mediastinum, with the following history:—

MR. PRESIDENT:—I have here a very interesting specimen of internal carcinoma. It is interesting, in the first place, because the primary seat of the disease was in a very unusual part of the body, namely, the mediastinum and root of the neck; and, in the second place, because the carcinoma, by encroaching upon certain of the organs contained in the mediastinum, disturbed their functions, and thus induced a remarkable train of morbid phenomena.

The subject was a gentleman, aged 57, who formerly had been much overwrought by the cares of business, and suffered from neuralgia of the head and neck. I was called to him on the afternoon of Friday, November 22d, and found him complaining of dyspnœa and extreme prostration. He said he felt too weak to get upstairs to his own room, or even to walk across the room wherein he sat, but, he had just returned from Brooklyn, a distance of several miles, whither he had gone to consult a homœopath, as he had been in the habit of doing daily for some time.

He said he should not go there any more, as he was too feeble. Face tumid and of a leaden hue; hands also tumid and cyanosed; breathing 30 to 36, short and loud, or noisy; much short dry cough; sharp, dry, hissing sounds were heard all over the back part of chest, excepting one patch of hepatization in right lung; at times his breathing was so loud that it could be heard in the next room while the doors were closed; heart laboring heavily; pulse 120 to 124 and irregular; mouth-temperature 97¼°; feet and ankles markedly œdematous, *i. e.*, they were puffed up with a tumefaction which pitted under pressure and presented the tense, shining, white, semi-transparent appearance of anasarca; the neck, especially at its root and on the right side, was the seat of a rather peculiar swelling; it was located beneath the deep fascia, hard and unyielding in feel, also nodular, as if the cervical lymphatic glands were implicated, but none of the nodules were movable; in short, the parts involved in the cervical swelling felt exactly as if they were matted together with some dense material.

On inquiry I was informed that the dyspnœa began only three days before; that it had increased very rapidly, and was worse by spells, or occurred in paroxysms; learned also that the œdema of the feet was first noticed on the previous day, and that the face and hands had presented a more or less tumid and blue appearance for some considerable time, much more, however, on some days than on others, and increasing or diminishing without apparent cause; learned, furthermore, that the swelling in the neck first attracted attention about eight weeks before, and that for about three weeks it had prevented his sleeping in the recumbent posture by occasioning a feeling of constriction in the throat and impending suffocation whenever he attempted to sleep in that posture; he felt least uncomfortable when sitting upright and leaning slightly forward; sometimes he had to lean backward, and this change of posture was almost sure to bring on nausea, with increased difficulty of breathing; he swallowed with much difficulty; liquids only could be taken and then in small quantity at a time; he got sleep only in snatches, but without lying down, so much was he bothered by the sense of obstruction in his throat on falling asleep. Prescribed sinapisms 8 × 8 inches, and of full strength, to be applied to the breast and supra-renal regions, and kept on twenty minutes; also: ℞ Potass. bromid. ʒij; potass. iodide. ʒi; aqua menth. pip. ad f. ℥ ij. M. Sigma. A teaspoonful every four hours in water. And: ℞ Pulvis digitalis, grs. iv.; pulv. scillæ, grs. viii. M. Divide in pulv. No. 4. Sigma. A powder every eight hours.

Saturday, November 23d.—Breathing somewhat easier and chest-sounds less dry; pulse 124 to 130; cough much less troublesome, and loose; sputum puriform; every third or fourth one, however, was rust-colored or pneumonic; mouth-temperature 98¼°; but the œdema of his feet and legs was considerably increased. Applied dry cups in large number, more than 40, to the back part of his chest and loins.

Sunday, November 24th.—Prof. Clark saw him in consultation. Cough dry again and more troublesome; œdema of feet and legs much increased; pulse weaker, very frequent, and intermitting every second beat; pulse in right wrist at times not so distinct as pulse in left wrist; hands still lead-colored, but more swelled; subcutaneous veins on upper and inner part of right thorax, especially the ramifications of the internal mammary, much enlarged, and presented a varicose appearance, seemingly from internal obstruction; urine scanty, high-colored, and on standing deposits copiously a brick-dust sediment; urine reddens litmus-paper; testing with heat and nitric acid reveals an abundance of albumen; this specimen on standing over night in the test-tube deposited a great number of minute ruby-colored crystals of uric acid on the sides of the tube; the urine of the previous day had presented just the same abnormities and reactions; the urine of to-day, examined with the microscope, was found to contain much urate of soda, some epithelium from the bladder, many blood-corpuscles, with granular fibrinous casts and granular epithelial cells from the uriniferous tubes; the urine of yesterday was not examined microscopically. *Diagnosis.*—It was thought that the obstruction to the circulation of the blood in the upper part of the body, the symptoms of which were so strongly marked, was due to compression of the descending cava and innominate veins exerted by some new formation in the mediastinum,—however, not aneurismal in character,—and that the same swelling at times diminished the flow of blood through the innominate artery. It was also thought that the dyspnœa was largely due to pressure on the trachea and bronchi and their attendant nerves which this swelling exerted, although some pulmonary œdema was present; and that the dysphagia was due to the same cause operating on the œsophagus. Finally, it was thought that the renal disorder had, in great part at least, resulted from the venous hyperæmia that necessarily followed the pulmonary congestion or inability of the blood to pass through the pulmonary capillaries. *Treatment.*—Dry cups were applied to his breast today; and acetate of potassa as a diuretic, wine-whey as a stimulant, quinine and iron as a tonic, with a mustard pediluvium and a sinapism to the epigastrium, were also ordered.

Monday, November 25th.—Some slight improvement in his pulse and strength was noticed, but on the other hand the œdema of his lower extremities was greater, and the flow of urine was not increased. Spiritus Mindereri was added to the acetate of potassa as a diuretic.

Tuesday, November 26th.—Worse in every respect; no diuresis, and anasarca much increased; rapidly growing weaker and longs for death; pulse 124, feeble and irregular; respiration 40; dyspnœa very urgent, and dysphagia great; moist rattles of œdema heard in all the pulmonary air-passages; countenance, etc., of a dull leaden hue. He continued to grow worse, and died on the following morning (Wednesday) at 8 o'clock, suffocated with pulmonary œdema.

Autopsy. 55 hours after death.—Cadaver rather thin in flesh and apparently in a good state of preservation; it had been kept on ice; extremities œdematous, especially the feet and legs.

Head.—Skull rather thick; dura mater somewhat more strongly adherent to it than usual; brain large. Sinuses of dura mater and veins of pia mater distended with dark-colored blood. On slicing the brain, however, the puncta vasculosa did not appear to be enlarged. The hyperæmia was venous and entirely passive in character. The visceral arachnoid exhibited opacity with considerable thickening of an old date, and some puckering from cicatrix-like contraction about the crura cerebelli, especially on the right side; but in other respects the arachnoid was normal. Brain-substance rather soft from post-mortem change, but otherwise normal.

Thorax.—On raising the sternum the mediastinum was perceived to be enlarged or widened and indurated by an adventitious growth, especially in its upper part, and the enlargement projected considerably more upon the right than upon the left side of the median plane.

The left pleural cavity was empty. The left lung was free from adhesions, large in size, much darkened in color, œdematous, and congested with venous blood. Its parenchyma appeared to be somewhat softer than natural, probably in consequence of post-mortem change. The congestion was entirely passive.

The right pleural cavity contained about sixteen ounces of blood-stained serum. The right lung exhibited some old pleural adhesions about the upper lobe, especially between its anterior free margin and the mediastinum. It was also blackened, œdematous, and congested, and its inferior lobe was in part the seat of hypostatic pneumonia.

The bronchiæ of both lungs were filled with frothy blood-stained serum, and the bronchial mucous membrane was deeply reddened. The bronchial glands were not particularly enlarged. Some of them, however, were quite dark (almost black) in color, but perhaps they were no darker than they should be in a subject of 57 years.

The pericardium contained about three ounces of bloody serum. The heart was rather fatty on its exterior, and quite flabby. It also appeared to be somewhat enlarged. On opening it, however, the right chambers, especially the right auricle, were found to be distended with recent coagula, which caused the organ as a whole to present an hypertrophied appearance, while in reality it was no larger than it should be. The cardiac valves were all free from disease.

Abdomen.—The liver was somewhat shrunken and nutmegy in appearance. Its parenchyma was softer than natural, and the seat of venous congestion. It also contained half a dozen firm, yellowish-white, spherical or egg-shaped deposits of carcinoma. They ranged in size from that of a grape to a lime. Some of them were softer at the centre than at the periphery. Some of them also were visible through the peritoneal coat of the organ and projected somewhat above the surrounding surface. The gall-bladder contained about an ounce and a half of dark-colored bile.

The spleen was rather small in size, but natural in color and structure.

The kidneys (both) were rather large, flabby, and considerably darker in color than natural. Their capsules adhered somewhat more firmly than usual. On section, the cortical substance presented a deep claret or maroon color. The renal parenchyma obviously contained much more than the normal quantity of blood. It was also softer than natural.

The stomach contained a considerable quantity of dark-colored liquid. The intestines were rather empty and contracted.

The tissues generally seemed more inclined to take on putrefactive changes than usual, just as they not unfrequently do in cases where death has resulted from acute albuminuria.

On examining more closely the diseased mediastinum it was found that the normal connective tissue had disappeared to great extent, and that its place had been usurped by a new growth of a yellowish-white color and firm or dense and brawny consistence, which had matted and blended or fused together all the organs contained in the upper part of the mediastinum. It was not limited or encapsulated anywhere. Moreover, it presented to the unaided eye the appearances which usually belong to rapidly growing scirrhus and fibro-plastic carcinoma. The ascending aorta, arch of the aorta, arteria innominata and its terminal branches, together with the left carotid and left subclavian arteries, the descending cava and the great veins belonging to the root of the neck, the trachea, the œsophagus, and the great nerves accompanying them, were all more or less completely embedded in and surrounded by this new formation. As already stated, this new structure was much more abundant on the right than on the left side of the median plane. It also extended upwards into the neck, beneath the deep fascia and among its reduplications, mainly on the right side, some considerable distance, but exactly how far we cannot tell, for we were not allowed to complete the examination in that direction on account of the disfigurement of the corpse which would result therefrom, but it seemed to gradually diminish in quantity and thus fade away.

Microscopical Examination.—A specimen taken from the mediastinum (it was scratched from the surface of a freshly made section with the point of a scalpel), and examined under the microscope, was found to contain a multitude of cells of various sizes and shapes, but most of them were small and round, elliptical or oval: some, however, were much elongated and almost club-shaped; occasional caudate and spindle-shaped cells were seen; some very large cells were also observed, which contained several small ones in their interior; besides, two or three bands of fine fibres were noticed.

Some of the milk-like juice obtained from one of the hepatic nodules and examined under the microscope, was found to be made up of cells which exhibited much variety in size and shape. Most of them, however, were either spherical, ovoid, or elliptical. But some of them were so much elongated as to be very nearly club-shaped. Occasionally one was caudate, and a few were fusiform. To the unaided eye the hepatic nodules appeared to belong to the medullary variety of carcinoma.

The lesion which immediately caused death was that of the kidneys. It induced general dropsy (anasarca), with dropsical effusion into the pleural and pericardial cavities, and into the pulmonary tissue and air-tubes, and thus the patient died asphyxiated.

Dr. Lidell, in conclusion, inquired if it was not rare to find cancer invading this particular locality as a primary affection.

Dr. Delafield replied that there were several such on record.

Malignant Disease of Bone.

Dr. F. H. Hamilton presented a specimen obtained by amputation at the shoulder-joint. The patient was a male, aged 40, whom Dr. H. first saw within the past year. A month or two preceding the said visit the patient had suffered considerable pain in the region of the insertion of the deltoid, and a day or two before the visit, in attempting to lower a window-sash, he had hurt his arm. It turned out on examination that the last injury had resulted in a fracture three inches below the lower end of the humerus. The existence of a fracture was not recognized by a very intelligent practitioner who first saw the case, because there had been no displacement. Splints were applied, and in the course of time the bones united. From the time the bone was broken until it united there was no pain, but as soon as the union was complete the suffering was as great as it was before. The pain continued and the bones enlarged, when a few weeks ago the arm was broken again. The exploring needle was introduced into the swelling, and penetrated the substance of the bone without resistance. The case was considered a very serious one, and Dr. Markoe, who was called in consultation, agreed with Dr. Hamilton in the expediency of an amputation. The amputation was accordingly performed, assisted by Drs. Markoe and Arnold.

The specimen presented consisted of the humerus, surrounding which was a matted mass of muscular tissue and fascia in a state of fatty degeneration. The seats of the previous fractures were well shown; the first low down, the second higher up.

Both fractures were somewhat transverse, a circumstance which led to the diagnosis of bone disease as the cause of the same.

The character of the lesion in the bone had not been determined, but it was plainly enough degenerative, and was in all probability malignant. The laminated tissue was expanded and softened, and in some parts was substituted by others.

Dr. Sands thought that the disease in question was a rare form of osteo-myelitis rather than cancer. It looked to him as a typical example of osteo-myelitis, in which the compact tissue of the bone had undergone a rarefaction and in some places become absorbed, and in which the marrow and endosteum had in both instances become ossified. He could see no trace of what he should consider a malignant growth, but on the contrary a good deal of adventitious and bony tissue, partly derived from the periosteum, but mainly derived from the endosteum, which had become ossified to the extent of obliterating the cylindrical canal. In the upper part of the specimen the tissue was attenuated and the marrow absorbed. In one portion there was a soft pulpy deposit, looking like pus. The occurrence of a fracture from slight causes would go as far towards substantiating the opinion that the case was one of osteo-myelitis as of cancerous degeneration.

Dr. Hamilton doubted the soundness of the opinion of Dr. Sands. He admitted that there were many appearances present in the specimens which were met with in examples of osteo-myelitis. He remarked that the disease had existed a whole year, and during that period of time there was ordinarily more or less necrosis. In the present instance no necrosis was found. He was familiar with examples of osteo-myelitis which terminated in that degree of degeneration observed in the specimen. He was aware that the bone softened, but such softening was extraordinary and unequivocal. This softening very soon hardened, and this hardness soon became very firm. He was, however, content to keep his opinion in abeyance until the microscopical examination had been made.

Dr. Sands stated that this form of osteo-myelitis was rare. The German pathologists describe two distinct varieties,—one in which the process of sclerosis goes on, and the other in which a rarefaction of the tissue occurs. He believed he had seen examples of both of these.

Dr. Markoe did not recognize the specimen as belonging to any of the cases of osteo-myelitis with which he was accustomed to meet. He had never seen any go to that stage without pus being formed or necrosis resulting; none which brought into its substance by a process of degeneration all the surrounding soft tissues.

Dr. Lidell was inclined to believe the disease malignant, never having seen a case of osteo-myelitis at all resembling it.

Dr. Delafield took the side of benignancy. If it were a malignant disease of the bone, the most frequent primary cause of such would be a sarcoma, but sarcomata did not present any of the appearances seen in the specimen. If it were a case of cancer it would come nearer to such as occur secondary to cancer in other parts. To such it did not even bear a resemblance. The appearances of the specimen were stronger in favor of osteo-myelitis than malignant disease, even without reference to the clinical history.

ACUTE ATROPHY OF LIVER.

Dr. Robert Watts presented a specimen of acute atrophy of the liver, with the following history:—

Wm. S. R———, age 22, a native of South Carolina. Had enjoyed good health previously, with the exception of an attack of remittent fever a year ago.

On *Monday, Nov. 25th*, after having passed a restless night, he complained of nausea and pain in the bowels, which he attributed to having eaten freely of pickled fish the previous evening. At noon he took ʒ ijss. of mustard in a tumbler of water, and also a copious enema of soap-suds, both of which were retained. The pain in the bowels was relieved, but the nausea continued. There was some acceleration of the pulse, and the temperature was above normal. At 4 P.M. he took another enema containing ol. ricini ʒ i., which was also retained. In the evening he felt pretty well, and slept during the early part of the night, after which he became restless.

Tuesday, Nov. 26th.—Complained of headache and pain in the back, and at 9 A.M. had a chill which lasted half an hour, and was followed by high fever (pulse 144 and temperature 104½°), which was succeeded by moderate sweating. By evening he was free from pain, and the pulse and temperature were normal. During the day food had been distasteful to him, but he drank freely of lemonade.

Wednesday, Nov. 27th.—Had a very restless night, and again complained of great pain in back and hypogastrium, and of headache. At 8.45 a severe chill occurred suddenly. This was checked by ʒ ss. of chloroform, which, however, was vomited after half an hour. Fever followed, with a pulse of 156 and temperature of 106°, and this was succeeded by a little sweating. All day he refused nourishment and drank sparingly of lemonade. The tongue was a little dry. The urine was scanty and high-colored, but it contained no albumen. During the afternoon he vomited two or three times. In the evening the pulse was 80, temperature normal.* At 4 P.M. he took quinia sulphat. grs. v., and at 8 P.M. mass hydrarg. grs. x. During the night was very restless, and complained of great pain in the stomach. About midnight he vomited a transparent light green fluid, and after this had frequent retching.

Thursday, Nov. 28th.—At 6½ A.M. took ol. ricini ʒ vi., and at 7½ A.M. quin. sulp. grs. x. Complained of severe pain in the lumbar region, but had no chill. During the whole day the vomiting and retching continued. He drank occasionally of cold milk, which was almost always vomited after a little time, and frequently showed no signs of coagulation.

To-day the sclerotic shows a yellow tinge. In the evening the features were pinched, tongue dry, pulse 130, temperature normal. Pain in back severe, principally in right side. During to-day took quin. sulp. grs. iij. every four hours, and half an ounce of brandy in milk three times.

Friday, Nov. 29th.—Vomiting and retching continued during night. Pulse 70, weak, and a little irregular. Temperature normal. Icterus well marked. Pain over liver very severe, with exquisite tenderness. Applied two leeches with some relief to pain, and afterwards kept dry hops applied hot. Bowels were moved three times, the first since Tuesday.

During to-day has been wandering in mind, but was easily roused, and would then talk rationally.

This afternoon a "coffee-ground" appearance was noticed in the vomited matter, which under the microscope was found to contain blood-corpuscles, large quantities of pigment, oil globules, and epithelium.

* On percussion the liver was found somewhat enlarged, and its edge could be felt an inch below the free border of the ribs.

The urine to-day was smoky and thick, and contained a large amount of albumen and some blood, but no casts.

Has taken quin. sulph. grs. iij. every three hours, with beef-tea and brandy per rectum. In the evening pain over liver had nearly ceased. Pulse 85, temperature normal.

Saturday, Nov. 30th.—Had a better night and got some sleep. Pulse 120, temperature 99°. During the day stomach was quiet, and he took considerable nourishment (beef-tea, milk, and brandy). Was mildly delirious but easily aroused. Has been comparatively free from pain. Omitted quinine.

At 7 P.M. Dr. Loomis in consultation. Pulse 144, temperature 99¾°, respiration 27. Urine drawn this evening was heavily loaded with albumen and contained blood, as did also the vomited matter. Percussion over liver showed dulness between the sixth and eighth ribs, none below. Abdomen retracted, and palpation caused little pain. A systolic murmur heard over base of heart and transmitted along vessels. No dulness over the chest, but the respiratory murmur could not be heard on the left side posteriorly. Pupils contracted. Tongue moderately dry. Dr. Loomis suggested the presence of acute yellow atrophy of the liver. Is wandering in mind, but easily aroused. Has had hiccough frequently yesterday and to-day. From this time patient grew steadily worse. At midnight pulse 140, temperature 100½°, respiration 34. Is not easily roused.

4 A.M. Comatose. Pulse 136, temperature 100¼°, respiration 48. Dulness over both sides of chest, more marked on the right; only bronchial respiration over the upper half of each lung. At 5.35 respiration gasping, face cyanotic, pulse intermittent and felt only in femorals.

5.58. Pulse stopped, the respiration having ceased first.

Dr. Francis Delafield has kindly furnished the following report of the autopsy made by him 7½ hours after death:—

Body deeply jaundiced.

Head not examined.

Heart.—Small ecchymosis in the visceral pericardium; small patches of atheroma in the mitral valve; heart walls firm.

Lungs.—Both lower lobes congested. In the left lower lobe a single infarction the size of an English walnut, with a firm yellow centre and red edges.

Liver is 9 inches long, 6 inches wide, 3½ inches thick, and weighs 2 lbs. 10 oz. It is of firm consistence, of light yellow color, mottled by red spots in the centre of each of the acini.

The gall-bladder contains a small quantity of thick black bile.

By firm and steady pressure this can be made to flow through the common duct into the duodenum. The liver-cells are nearly all swollen and filled with small shining particles, so that some of them look almost black by transmitted light. In a very few places the cells are broken down into a mass of granules and fat.

The *stomach* contains a little blackish fluid. Its mucous membrane is of a grayish-white color.

The *duodenum* is empty; its mucous membrane is of a grayish-white color.

The *spleen* is of medium size, not softened, and of a pinkish color.

The *kidneys* are large; both pyramidal and cortical portions are swollen. The markings of the cortex are regular, but obscured by an increased congestion. In the papillæ are a number of yellow lines parallel to the tubes. The epithelium throughout is swollen and finely granular. In some of the convoluted tubes there is a little blood. In many of the straight tubes, especially in the papillæ, blood and granular matter have accumulated so as to fill them completely.

Dr. Delafield remarked that the liver was much firmer than was usually seen in such cases, owing, perhaps, to the early period of the autopsy. The minute lesions, although well characterized, were not so far advanced as regards breaking down of the cells, although the case was of the usual duration.

MYELOID SARCOMA OF CHOROID.

Dr. C. M. Allin presented a specimen of myeloid sarcoma of the choroid. The patient, aged 38, from whom it was removed, noticed by the merest accident that the vision of one eye was gone. This was about four years ago, when wiping one eye she discovered that she was in darkness. She applied to a physician, who assured her that her trouble was only temporary. Not improving, however, as she expected, she consulted other medical gentlemen, and lastly presented herself to the State Medical Society of Vermont. At that time an opacity of the cornea had appeared, and the physicians who then saw her pronounced her case one of cataract, but would not advise an operation. She came to the city a fortnight ago, when Dr. Allin removed the tumor.

On examination, she presented a tumor of the orbit projecting an inch and a half beyond the orbital margin. The conjunctiva was stretched over the growth, but at no point had it given way. The cornea had sloughed within the week previous. There was no particular pain complained of until the sloughing occurred. She had no enlargement or protrusion of the eye until last September, since which time the growth had increased very rapidly.

The operation was performed by dividing the conjunctiva close to the palpebral margin, then removing the tumor and all the tissues of the orbit that could be reached, dividing the tumor far back at the base of the orbit. A paste of chloride of zinc was then freely applied to the base of the orbit and also to the edges of the lids to promote sloughing of the same. The nerve stump was found infiltrated with diseased matter, necessitating the application of the caustic.

The specimen showed the eye but very slightly encroached upon. The disease had evidently commenced in the choroid, pushing forward the retina, involving not much more than one-quarter of the globe, and rupturing the sclerotic in its posterior portion very near the nerve. Since the rupture of the globe the disease had extended itself posteriorly.

Dr. Delafield, to whom the eye had been given for a microscopical examination, also called attention to the fact that the greater portion of the growth was extra-ocular; that it commenced behind the choroid, was thickest at the fundus, becoming thinner as it passed forwards. Continuous with this, through the sclera, was the extra-ocular growth surrounding the nerve, splitting into layers and in part replacing the nerve elements. This growth was prolonged within the sheath as far back as the section of the nerve. The manner in which the growth had extended itself from a small growth within the eye to a larger one outside was not usual. If the eye had been extirpated earlier, before the sclerotic coat had been perforated, and the disease extended itself outside, the prognosis would have been favorable. He had under his own observation two cases of these strictly intra-ocular growths in which the respective immunity from a return was three and five years.

Dr. Allin referred to a case in support of the unfavorableness of prognosis when the tumors became extra-ocular. The patient was a man who was examined early and found to have a simple detachment of the retina caused by a growth underneath. Extirpation was recommended, but the patient declined to have the operation performed. Finally, the tumor filled the whole of the interior of the eye, a small portion appearing as a little nodule externally. The pain was so excruciating that the patient then gladly embraced the opportunity of removal of the disease. The operation was duly performed, and the wound healed perfectly. He continued well for three years and a half, at the end of which time a small nodule appeared on the anterior wall of the abdomen. This was followed by three or four similar ones in the groin; soon after cerebral disturbance appeared, and he died within two months from the reappearance of the disease.

Dr. Sands exhibited the patient from whom he had removed, a month before, the tumor of the antrum. The external wound had healed perfectly, and, with the exception of the lineal scar of the incision along the side of the nose, the wing of the nose, and through the median line of the lip, there was no evidence of any operation having been performed. The result of the operation in preventing deformity and paralysis of the facial, so common with the old method, was such as to commend the method to the attention of surgeons. The plan is that jointly advised by Fergusson and Langenbach.

Dr. Knapp, who had examined the tumor microscopically, pronounced it a myxo-chondroma, and illustrated the appearances presented by the different cells, and their relations to each other, by diagrams, microscopic preparations, and blackboard representations.

The Society then went into executive session.

New Instruments.

A CURRENT REVERSER WITH FLEXIBLE ELECTRODES.

By GEORGE M. BEARD, M.D.

The accompanying cut represents a current reverser that I have recently devised and perfected, and which is now constructed by Messrs. Tiemann & Co.

It differs mainly in this feature from other devices to accomplish the same purposes, viz.: *that the current is reversed by simple and slight pressure of the thumb,* without the intervention of a slide, or any complex arrangement whatsoever.

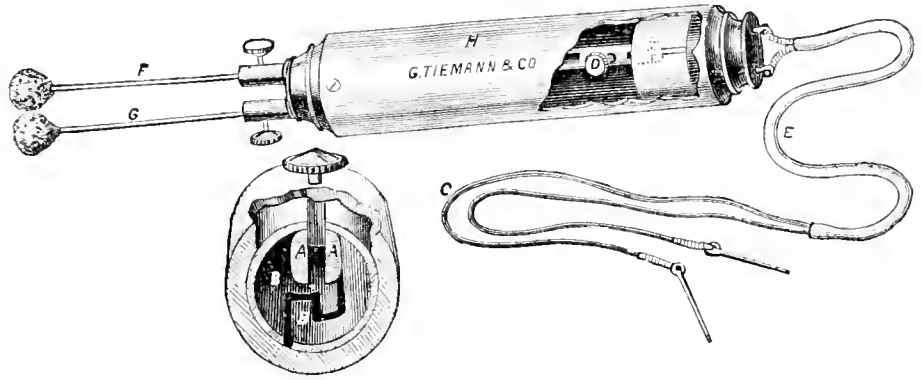
The letter D represents the button of the spring, by pressing which, the current is interrupted or reversed. Pressing it lightly, *interrupts* the current; pressing it firmly, *reverses* it.

In the vertical section of the hard rubber handle, A A is represented as springing up against the metallic plate on the upper and inner surface of the handle. Pressing this slightly down, metallic connection is broken and the current is interrupted; pressing it firmly down, the connection is made and *reversed* at B B, the metallic plate on the lower surface of the handle.

C represents the wires that connect with the battery, enclosed in a rubber tubing E.

F and G are flexible wire electrodes armed with sponges; they can be separated several inches and kept there, or put close together as represented in the cut. The advantages of this are these:—1. In many of the applications of localized electrization this neat and simple arrangement saves considerable expenditure of muscle on the part of the operator. One hand can be perfectly free while the other holds and guides the electrode. In electrifying the muscles of the hand and arm, and of the face especially, it is far more convenient than to use separate electrodes.

2. In cases of paralysis of motion and of sensation, where *voltaic alternatives* are sometimes indicated, this is the easiest conceivable method of reversing the current. I find the arrangement of the flexible electrodes very convenient in external applications to tumors, rheumatic joints, and sprains.



ARMY AND NAVY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 19, 1873, to March 3, 1873.

Vollum, E. P., Surgeon.—The leave of absence, granted by S. O. 25, Department of the Platte, February 15, 1873, extended 30 days. S. O. 22, Military Division of the Missouri, February 24, 1873.

Pope, B. F., Assistant Surgeon.—To accompany 7th Regiment of Cavalry to Fort Randall, Dakota Territory, and after completion of this duty return to Louisville, Ky., reporting to Medical Director of the Department. S. O. 40, Department of the South, February 26, 1873.

Hitchcock.—Prof. Edward Hitchcock, M.D., of Amherst College, Mass., has returned from his tour round the world.

Medical Items and News.

Long Island College Hospital, Brooklyn, New York.—The Introductory Lecture was delivered March 5th, at 8 o'clock P. M., by Professor John Byrne, M.D.

Medical College Commencements.—The Sixty-sixth Annual Commencement of the College of Physicians and Surgeons, New York City, was held at Steinway Hall, February 27, 1873. The exercises were opened by prayer by Rev. Marcius G. Hutton, D.D. The degree of Doctor in Medicine was conferred on 104 graduates by Edward Delafield, M.D., president of the College. The following announcement of prizes was made by Professor Dalton:—Graduating theses.—First prize to Landon R. Longworth, A.B., M.D., of Cincinnati, Ohio, for a thesis on "Ligature of the External Carotid." Second prize to Daniel H. Smith, M. D., of New York City, for a thesis on "Hydrocyanic Acid." Andrew H. Smith, M.D., received the prize of the Alumni Association for a thesis on "The Effects of High Atmospheric Pressure, including the Caisson Disease." Edward J. Birmingham, M.D., of N. Y., received the "Otis Prize." The "Thomas Prize" was awarded to Jos. D. Amway, of New York. The valedictory address to the graduating class was given by Chas. Kelsey, M.D., of N. Y. Rev. H. C. Potter, D.D., delivered the address to the graduates. The music was by the well-known Seventh Regiment band.

The Twelfth Annual Commencement of the Bellevue Hospital Medical College, N. Y. City, came off at the Academy of Music, February 27, 1873. Rev. Alfred B. Beach, D.D., chaplain of the College, opened the exercises with prayer. George F. Talman, Esq., president of the Board of Trustees, conferred the medical degrees on 167 graduates. Hon. John R. Brady, of the Board of Trustees, made the address to the graduating class. The valedictory address was given by John R. Kinney, A.M., M.D., of Hawaii, Sandwich Islands, a member of the graduating class. The proceedings were enlivened by the presence of an excellent band under the direction of Mr. Carl Bergmann.

Deaths.—Prof. Hugh L. Hodge, M.D., of Philadelphia, died February 26, 1873, in the 77th year of his age. He was born in that city, in 1797, of Scottish-Irish parents, and was educated at Princeton College. He entered the University of Pennsylvania, as a medical student, under the guidance of the late Dr. Caspar Wistar, of Philadelphia, and graduated in 1818, and immediately made the study and practice of obstetrics a specialty.

To the chair of Prof. Dewees, at the University, Dr. Hodge succeeded in 1835, and, with great distinction, retained it until 1863, when his advancing years compelled him to resign its attendant duties; the trustees thereupon conferred upon him the emeritus degree. In its days of prominence, Dr. Hodge was a useful member of the Kappa Lambda Society; he was also one of the editors of the *North American Medical and Surgical Journal*. In 1860, Prof. Hodge wrote a work on the "Treatment of Diseases of Women and Children," and in 1864 one on the "Principles and Practice of Obstetries."

The father of Prof. Hodge was the founder of the Second Presbyterian Church, of Philadelphia, and in the congregation attached to that church Prof. Hodge remained a devoted and useful member until his death.

Dr. Uriah G. Bigelow, late president of the Albany County Medical Society, and consulting physician of the Albany Hospital, died in Albany, February 24, 1873, aged 53 years.

Alumni Associations.—The annual dinner of the Alumni Association of the College of Physicians and Surgeons was given at Delmonico's, Wednesday evening, February 26, 1873, Dr. C. R. Agnew, president, in the chair. About 150 of the graduates were present. The following gentlemen responded to the toasts: Prof. T. Gaillard Thomas, M.D., Prof. Calvin Ellis, M.D., of the Harvard Medical College; Rev. Howard Crosby, D.D., LL.D., Prof. Fordyce Barker, M.D., Parke Godwin, Esq., Rev. Wm. Adams, D.D., John P. Crosby, Esq., Leroy M. Yale, M.D., B. F. Dawson, M.D., S. O. Vanderpoel, M.D., E. M. Hunt, M.D., and Dr. Hayes.

The officers of this Association for this year are as follows:—*President*, Prof. C. R. Agnew, M.D.; *Vice-President*, Robert A. Barry, M.D.; *Secretary*, Frederick A. Burrall, M.D.; *Assistant Secretary*, George Bayles, M.D.; *Treasurer*, T. M. Cheeseman, M.D.; *Committee on Prize Essays*, Drs. Geo. A. Peters, Gouverneur M. Smith, and Ellsworth Eliot.

The annual prize of $250 for the best essay was awarded to Dr. Andrew H. Smith.

The Alumni Association of Bellevue Hospital Medical College held its annual business meeting at the Mott Memorial Library, Wednesday evening, February 26, 1873, Dr. Charles A. Seale, first Vice-President, in the chair. The reports of the Corresponding Secretary and College Historian were read and approved. The election of officers resulted as follows:—*President*, Prof. Wm. T. Lusk, M.D.; *First Vice-President*, Thos. R. Pooley, M.D.; *Second Vice-President*, Frank H. Bosworth, M.D.; *Corresponding Secretary*, Bradford S. Thompson, M.D.; *Recording Secretary*, Geo. W. Wells, M.D.; *Treasurer*, Henry Raphael, M.D.; *College Historian*, Frederick A. Castle, M.D.

The annual dinner of this Association will come off in October, 1873.

Alumni Association, Med. Dept. University of New York.—The annual meeting of this association was held at Association Hall, Tuesday evening, March 4th, 1873. The exercises were opened with prayer by Rev. Howard Crosby, D.D., LL.D., Chancellor of the University. Introductory remarks were made by the Chancellor, and John Taylor Johnston, Esq., Vice-President of the Council of the University. The annual address was delivered by S. S. Satchwell, M.D., of North Carolina, class of 1845. The speeches and music were interesting and entertaining.

The annual business meeting took place after the exercises were finished. The following gentlemen were chosen officers for 1873-4: *President*, Dr. James R. Leaming; *Vice-Presidents*, Drs. Henry S. Hewit, Alfred L. Carroll, Wm. Cunniff, S. Fleet Speir, Bolling A. Pope, Thomas C. Finnell; *Secretary*, Dr. Charles Inslee Pardee; *Treasurer*, Dr. D. B. St. John Roosa; *Orator*, Dr. Alfred L. Carroll; *Executive Committee*, Drs. Jas. H. Anderson, Jos. S. Monell, Lewis Fisher, S. Seabury Jones, C. D. Varley, Harvey S. Gay, Jos. W. Howe, Stephen J. Clark, F. R. S. Drake, Aug. W. Maclay, F. Le Roy Satterlee, John W. Hunt.

The following resolutions, with reference to the death of Dr. James L. Brown, were unanimously passed.

Whereas, It has pleased Almighty God to remove by death Dr. James L. Brown, an alumnus of this University; therefore,

Resolved, 1st, That the Alumni have sustained an irreparable loss.

2d. That we extend to the family and friends of the deceased our cordial and affectionate sympathy.

3d. That we commend the example of our deceased friend and associate as one worthy of our imitation and emulation as illustrating the character of a true gentleman and accomplished physician.

JAS. R. LEAMING, M.D., President.
CHAS. INSLEE PARDEE, M.D., Secretary.

NELSON.—Died at Gifford's, Staten Island, N. Y., March 1st, 1873, Dr. Robert Nelson, aged 81 years.

MEDICAL LIBRARY AND JOURNAL ASSOCIATION OF NEW YORK.—At the Friday Evening reunion of February 28th, 1873, Dr. J. C. Peters, President, in the chair, Dr. H. G. Piffard made remarks on "Urinary Analysis," with practical illustrations. Dr. Neftel spoke of the spectroscopic analysis of the urine. The President announced the donation to the Association of a handsome framed portrait of Dr. Gurdon Buck, an ex-president, also an elegant one of the late Prof. Jos. M. Smith; the latter tendered by his son, Dr. Gouverneur M. Smith.

The following works were donated to the library:—Medical and Surgical History of the War—2 vols. from Surg. General U. S. A.;

Pharmacopœia of Mass. Med. Society, 1808—The first work of the kind published in the United States.

Pharmacopœia of New York Hospital, 1816.

Pharmacopœia of United States, 1820, 1828, 1864—three copies.

Statistical Report of the Sickness and Mortality in U. S. A., embracing a period of twenty years—1819–1839.

The last six volumes were given by the President, who has, on previous occasions, generously donated some of his rarest works to the Association.

UNIVERSITY OF PENNSYLVANIA.—Prof. George F. Barker, of Yale College, has accepted the call to the chair of Physics in the University of Pennsylvania, and will assume it about April 15th.

THE LATE DR. JAMES L. BROWN, OF NEW YORK.—At a meeting of the Medical Staff of the Demilt Dispensary, held on the 7th of Feb., 1873, the following preamble and resolutions were adopted:—

Whereas, It has pleased Providence to bereave us of our highly esteemed colleague, James L. Brown, M.D., we, the remaining members of the Medical Staff of the Demilt Dispensary, deem it a sacred, though a painful duty to give publicity to such sentiments as our associations with him have inspired. Therefore

Resolved, That in the most unexpected death of Dr. Brown we feel a personal affliction; for by it we have lost not only an associate and colleague, but a highly skilled medical counsellor and a brave and faithful friend.

Resolved, That his removal has deprived the Profession of an ornament and shining light; society of a citizen of the stanchest morality, who never knowingly did wrong, and who always dared to speak and perform what he believed to be right.

Resolved, That the Demilt Dispensary, to whose usefulness as a public charity he contributed in most of its departments during many years of service, has in Dr. Brown lost an officer whom it will be hardly possible to replace, and the public who have there sought his advice will rarely find in his place one of greater learning and fidelity.

Resolved, That the family of our deceased colleague have our sincerest sympathy and condolence.

Resolved, That a copy of this expression of our feelings be sent to the family of deceased, to the Trustees of this Dispensary, to the Pastor of St. Luke's Church, and be furnished the Medical Journals of this city for publication.

STEPHEN ROGERS, M.D.,
W. T. WHITE, M.D.,
EDWD. J. DARKEN, M.D.,
Committee.

THE LATE DR. J. S. L. TONELIER, OF NEW YORK.—At a meeting of the Board of Trustees of the New York Dispensary, held February 17th, 1873, the decease of Doctor J. S. L. Tonelier, a district physician of the Dispensary, on the 25th January, 1873, at the advanced age of eighty-five years, having been communicated, it was

Resolved, That the long continued and faithful services of the deceased as physician to the Dispensary well deserve a tribute of respect and acknowledgment from this Board. First appointed in 1840 and serving till 1845 (when he resigned), Dr. Tonelier was re-appointed in 1856, and continued in the performance of his duties till December 5th, 1872, the commencement of his last illness. His uniform regularity of attendance and devotedness to the care of the sick poor, continued for so many years and to such an advanced age, furnish a rare instance of professional fidelity that may well excite our admiration, and be a worthy example for imitation.

Resolved, That in his decease the Dispensary has lost a faithful medical officer, whose excellence of character was warmly appreciated by all his associates.

An extract from the minutes.

ROBERT B. CAMPBELL, *Secy.*

HUDSON COUNTY MEDICAL SOCIETY, N. J.—At the recent annual meeting of this Society, the following officers were elected for the ensuing year: *President*, Dr. M. A. Miller; *Vice-President*, Dr. J. D. McGill; *Secretary*, Dr. Henry Mitchell; *Treasurer*, Dr. H. H. Abernethy; *Reporter*, Dr. S. R. Forman.

HUDSON COUNTY INSANE ASYLUM, N. J.—This new asylum is about finished. Dr. Eddy, late Deputy County Physician, is to be the Superintendent.

DR. A. D. ROCKWELL has been appointed Electro-Therapeutist to the New York State Woman's Hospital.

DEATH OF PROF. TORREY.—Prof. John Torrey, M.D. and LL.D., the renowned botanist and chemist of Columbia College, died March 10th, 1873, in the 77th year of his age.

He was born in this city in 1798, and received his medical diploma in 1818 from the College of Physicians and Surgeons. In 1824 he was appointed Prof. of Chemistry, Geology and Mineralogy in the Military Academy of West Point. He occupied the chair of Chemistry and Botany in the College of Physicians and Surgeons from 1827 to 1855, and at the time of his death he was considered in Europe to be the foremost of American botanists, and a leading author of botanical reports and text-books.

New Publications.

BOOKS RECEIVED.

CLUB FOOT; ITS CAUSES, PATHOLOGY, AND TREATMENT. Jacksonian Prize for 1864, by Wm. Adams, F.R.C.S., Surgeon to the Great Northern Hospital London, etc.; 2d ed., Phila: Lindsay & Blakiston, 1873.

LESSONS IN ELEMENTARY ANATOMY, by ST. GEORGE MIVART, F.R.S., etc. London: Macmillan & Co., 1873.

NOTES ON ASTHMA; ITS NATURE, FORMS, AND TREATMENT, by JOHN C. THOROWGOOD, M.D. London, 2d ed. Phila.: Lindsay & Blakiston, 1873.

Original Communications.

THE BEST METHOD FOR REMOVING THE UPPER MAXILLARY BONE.

By JULIAN J. CHISHOLM, M.D.,

PROFESSOR OF OPERATIVE SURGERY IN THE UNIVERSITY OF MARYLAND.

As a surgeon, but more especially as a teacher of operative surgery, I have constantly occasion to consult authorities on the various methods adopted by surgeons for the performance of operations. In reviewing the *modus operandi* for extirpating the upper jaw, I have noticed that in the many works or practical surgery, even the most recent, but one mode of procedure is described. All of these books mention the curved incision through the cheek, extending from the external angular process of the frontal bone to the angle of the mouth; to be modified, if found necessary, by the addition of a horizontal incision running immediately beneath and parallel with the lower lid, and extending from below the inner canthus of the eye to the vertical cheek incision. If required, this horizontal incision may be made midway between the mouth and the orbit, extending from the wing of the nose directly outward to the curved incision already referred to. Mr. Fergusson had suggested an incision passing through the median line of the upper lip, then curving around the wing of the nostril and extending upwards in the line where the nose and cheek meet each other to within one-half or three-quarters of an inch of the inner canthus of the eye. When only a portion of the upper jaw is to be removed, this latter incision around the nose appears to be sufficiently extensive for exposing the surface. When a larger surface is to be laid bare, Mr. Fergusson adds this nasal incision to the curved incision extending from the angle of the mouth upwards. This curved incision through the side of the face is open to the very serious objection of leaving an ugly scar, to which is added paralysis of all of the muscles in front of the wound through division of the branches of the facial nerve. When the horizontal incisions are used, the face is much more extensively scarred and thereby permanently disfigured.

Having for many years taught and practised Dieffenbach's operation for the removal of the upper jaw as the best method, both as to the ready exposure of the entire bone and leaving the least deformity as a permanent result, I have been much surprised to find so little mention of this excellent method. Chelius, in his System of Surgery, refers to Dieffenbach's method in one line only. In the more recent works of Holmes, Erichsen, Fergusson, Gross, Gant, and others, the operation appears to have been completely lost sight of.

Dieffenbach's operation consists in making the incision in the median line of the face. Commencing at the root of the nose, an incision slits the nose and the upper lip in the median line. A short incision joining the first at right angles, extends from the root of the nose to the inner angle of the eye. The lower lid being drawn downwards, the knife is carried along the entire length of the conjunctival cul-de-sac, separating this lid from its orbital connection, and utilizing the entire length of the lower lid in the horizontal flap. When the flap, as defined by the vertical and horizontal incision, is dissected up, it will lay bare the entire front, and, if necessary, side of the face, without having divided any large vessel, or any important nerve-branch. With such an exposure the superior maxillary bone can be isolated with great ease, as every surface of contact with neighboring bones can be clearly brought into view. With no additional incision I found no difficulty in removing from the living subject the superior maxilla, malar, and palate bone, which enabled me to extirpate a large fibroid with extensive adhesions to the roof of the pharynx. After the removal of the maxilla, when the flap is brought back to its normal situation and carefully adjusted by several points of suture, union speedily ensues. This operation leaves so little deformity, that in the majority of cases the line of incision will escape detection unless the scar be sought. In many faces the thin skin is so stretched over the bridge of the nose as a normal condition, that it reflects light as a whitish lines somewhat similar to the scar made in this operation. The inferior lid retains all of its movements. The sides of the face present their normal appearances unscarred, with nerves and vessels intact. The eye-muscles can be so nicely manipulated through this bold flap, that all the movements are retained. As the suspensory ligaments of the eye-ball remain adherent to the roof and sides of the orbit, there is no drooping of the eye-ball. Immediately after the sutures are placed I have seen the patient move the eyes in parallel axis, showing perfect control.

Experience both on the living and dead subject has proved to me the advantages which Dieffenbach's operation possesses over all others designed for the removal of the entire upper jaw. I would recommend to those who may have this operation to perform, to give the method by median vertical incision a trial, feeling assured that those who have once used this better method will not go back to the incision through the cheek into the angle of the mouth, as described in most treatises on surgery.

A CHEAP AND SIMPLE SUSPENSION FOR THE LEG,

GIVING MOTION IN ALL DIRECTIONS.

By GEO. A. VAN WAGENEN, A.M., M.D.,

HOUSE SURGEON BELLEVUE HOSPITAL (SERVICE PROF. STEPHEN SMITH.)

On September 10th, a very bad horse-car accident, producing a compound comminuted fracture of tibia and fibula, was admitted to one of our wards. A consultation concluded to save the limb if possible, and I put it up immediately in plaster-of-Paris. The fenestra at each side of the splint had to be large; and, carefully as it was made to fit the leg, slight motion of the bones was inevitable on any attempt to raise or *turn* the limb; and pain in consequence. To relieve this pain, and prevent injury to the parts from motion, I made the apparatus here described.

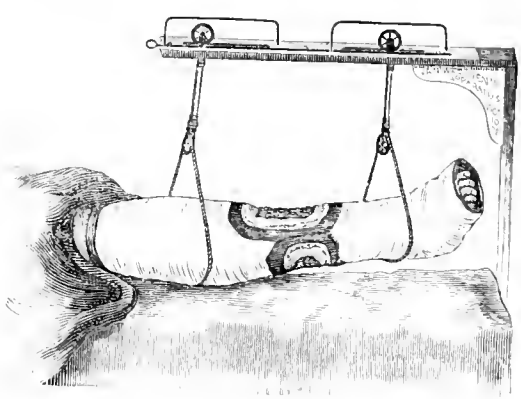
It answered these ends so perfectly, and is at the same time so cheap, that it was suggested others might be glad to avail themselves of it, extending its usefulness.

It consists of an elbow ┐ of wood projecting over the foot of the bed, from which the leg is suspended by two pieces of rubber tubing; one above the ankle, the other just below the knee. The tubes have common grooved iron pulleys or wheels at each end: Those above, rolling on a large iron wire to allow motion towards the head or foot of the bed; those below,

at right-angles to the others, holding the rings of rope in which the leg rotates;—this last being far the most important, allowing patient *to turn on either side*. Motion on these rollers is accomplished with so *little resistance* that there is *no pain*.

The upright of the elbow to go at the foot of the bed should be long enough to rest on the floor, or any convenient post of the bedstead, and project about two feet above the level of the mattress,—the horizontal piece long enough to reach nearly to the knee; pine $\frac{3}{4} \times 2$ inches is heavy enough. The angle made by these pieces is braced, and a strap of hoop iron outside makes it very strong. In the horizontal piece two slots are cut wide enough to allow the iron pulleys to pass through, and of sufficient length to allow the patient to draw himself up and down in bed. A $\frac{1}{4}$ inch iron wire passes the whole length of this piece above the slots, steadied by small staples, so that it may be withdrawn. On this the upper pulleys run. The wire shields ⌐¬ above these slots are to prevent the bedclothes from resting upon the rollers.

The pulleys or wheels are fastened in the rubber tubes by making a few turns of copper wire around the iron screw of the pulley. This is pushed into the tube and bound outside with fine wire.



Rings of rope large enough to pass over the foot are then put through the lower pulleys. If these rings open, or the foot is slipped out of them, the leg is taken down without any of the apparatus about it; and the large wire may be withdrawn, and the leg lowered with the pulleys and rings still attached.

The material used costs only about seventy-five cents, and can all be bought *ready for use*. An evening is abundant time to construct the whole apparatus. The longitudinal motion is the same used in Salter's bed-cradle, having, however the advantage that the whole bed is left free with nothing to inconvenience the other limb. Besides, there is no tilting sideways, which we always have when a cradle stands on a mattress. But most important, and what I have never seen used before, is the arrangement to *rotate* the limb freely, and allow patient to turn on either side without jarring the broken member. My patient was able to rotate three-quarters of a circle, touching his toes on either side. He slept on his side and never had even a tired back, much less a bed-sore, though he was not permitted to sit up for nearly five weeks. This apparatus was a gradual improvement from suspension with bandage and rubber straps. It has answered its purpose so well that though more than two months have now elapsed since the injury, and union is getting quite firm, the patient, who has been sitting up for the last two weeks, still insists that he must have his leg suspended in it at night if he is to sleep soundly, his motion and turning in sleep never producing pain enough to waken him.

I hope that other surgeons may find this simple and cheap little piece of apparatus as useful as I have. Success often depends on such *comparatively* unimportant things.

STRANGULATED FEMORAL HERNIA. OPERATION BY TAXIS.

DEATH IN 67 HOURS FROM RUPTURE OF THE BOWEL.

By THOMAS E. SATTERTHWAITE, M.D.,

PATHOLOGIST TO ST. LUKE'S AND THE PRESBYTERIAN HOSPITALS.

The following case is of interest, as it illustrates a rare affection of the bowel, and one which may be the cause of failure when the operation by taxis is performed.

Anne Lewis, aged 25, born in Ireland, single, had been complaining of abdominal pain and constipation for some months. On the 11th of July last, after two days of more than usual suffering, she took a dose of salts, but was unable to retain it on her stomach. Finding herself getting gradually worse, and becoming alarmed, she sent for a physician. I saw her first about 5 P.M. She then complained of distressing pains over her abdomen and in the left groin, where she said there was an inflamed gland such as she had once had on her neck. This trouble in her groin had annoyed her before, but had always been relieved on lying down. Now, however, it had persisted, and the pain had become so severe that she had used poultices. She had vomited nothing but the medicine.

Her countenance was anxious, respiration hurried, pulse about 75 and irritable, surface cool.

Examination showed on the left side a femoral hernia about the size of an English walnut. There was one prominent swelling, and close by and to the inner side were two smaller ones, separated by what seemed to be a constricting band. There was no tympanites nor unusual sensitiveness of the abdomen on pressure, though, in the tumor, the sensitiveness was marked. No effort at reduction was made at this time.

After consultation with Dr. Gurdon Buck, the patient was removed to St. Luke's Hospital and taxis was performed under ether $2\frac{1}{2}$ hours after she was first seen. No difficulty was met with in effecting reduction; in fact, the entire mass yielded to a very gentle pressure, slipping away from beneath the fingers. The femoral canal was left quite free, so that the finger introduced in it met with no resisting body.

Partial relief followed the operation, but the pain continued and vomiting commenced the next day. On the same day some tympanitic distention of the abdominal walls showed itself, and the bowels remained unopened; on the third day some abatement in the unfavorable symptoms took place, and under the opiates given the respiration and pulse fell to nearly the normal standard. The bowels were still unopened. Opiates were given freely and at regular intervals. The same evening the temperature and pulse rose very rapidly, though the respiration remained as before.

The patient died on the following day.

Autopsy 22 hours after death.—There was great tympanitic distention of the abdomen. The bowels were found somewhat congested. In many places the coils were attached to one another and to the omentum by slight and newly formed adhesions. There was a general deposit of plastic material over the anterior surface of the peritoneum, and fæco-purulent fluid was

found throughout the peritoneal cavity. At the orifice of the left femoral canal there was found a knuckle of small intestine, partially attached to the upper edge of the opening. Above this point the intestine was very greatly distended, chiefly by gas. At one point in the mass fæco-purulent matter was discharging itself freely in a direction downwards and inwards, toward the floor of the pelvis. A narrow band was all that remained to unite the upper and lower portions. This point was about six feet above the ileo-cæcal valve.

From a point an inch below the rupture, and downwards for a distance of about three inches, the adjacent sides of the gut were crowded together and adherent. The confronting surfaces were pretty firmly united by plastic matter, but there was no appearance of twisting. On the exterior of the intestine there were collections of a firmer fibrinous tissue.

After removing this portion, with about six inches of the bowel above and below the rupture, water was poured from above downwards, and the obstruction was found to be so great that the stream which passed was only the size of a goose-quill.

Further examination showed that this obstruction was due to a double stricture, the upper one admitting only a No. 8 urethral bougie, and the lower one the little finger. Between these two points the intestine was dilated for a length of about an inch and a half, and was empty and of a dusky color.

At the seats of stricture were found small rounded or oval elevations; these were on the inner surface, and opposite to the attachment of the mesentery.

Subsequent microscopic examination showed them to be solitary glands undergoing degeneration. In one instance a cheesy deposit was found in one of these. In general, the glandular epithelium was so changed as to leave some doubt of its true character; still, the reticular framework of the follicles was, as a rule, demonstrable. Both the submucous and muscular coats were somewhat hypertrophied, and the latter was studded with lymphoid cells.

In the works that have been within my reach, I have only met with three cases that are at all similar. Two of them were originally published in the Pathological Transactions of London. Both of them were strictures of the small intestine. In each of these instances the walls of the gut were very much thickened, and the calibre so much diminished as only to admit the tip of the little finger. The first case was associated with cicatrizing ulcers about the strictures; in the second case the strictured portion had evidently formed part of the contents of an old hernial sac, into which it had frequently passed. The third case is alluded to by Rokitansky when he speaks of "a fatal case of constipation where a portion of the ileum, 24 inches in length, was found enclosed in a cartilaginous sheath of peritoneum 4 inches long;" and he adds that "extensive adhesions among the coils or portions of the mesentery often affect the small intestine so as to produce external valvular duplicatures of the intestinal coats at the projecting angles," and that "this form of adhesion is not infrequently developed in intestinal segments which have long been included in large hernial sacs."*

These two last cases resemble the present one in the fact that the stricture is associated with an old reducible hernia; and the last case has the further point of resemblance, viz., that the coats were united externally by fibrous matter. The thickening of the intestinal walls in such cases is usually excessive, while in this case it was moderate in amount. I learned nothing from her previous history to incline me to the idea that her trouble was congenital.

50 E. 31ST STREET.

* Path. Anat., Vol. II, p. 59.

FOUR CASES OF IMPERFORATE ANUS OCCURRING IN THE MALE INFANT,

IN THE PRACTICE OF

SAMUEL S. THORN, M.D.,

TOLEDO, OHIO.

Case I. On Saturday evening, Jan. 2, 1869, I was called upon by Dr. J. G. Nolen, of this city, to see with him a child in his practice with imperforate anus. The child, a vigorous one, was born on the morning of Jan. 1, 1869, of a strong, healthy German woman, the mother of three other living children all well formed. Upon examining the perineum I found the raphe, from coccyx to scrotum, well defined and continuous. At the natural seat of the anus was a depression of dark blue color, and in shape resembling the umbilicus of a child a month or more of age; from its color I expected to find the extremity of the intestine close at hand. To the touch the tubercle was lax and movable, but beneath this all was firm and resisting under pressure. There being no other alternative, the consent of the parents obtained, we proceeded immediately to operate. The child was placed in the position for lithotomy, upon the lap of Dr. N., the feet drawn well up over the abdomen. Upon examining the penis preparatory to the introduction of a catheter, there was evidence of a connection between the urethra and rectum. The nurse being questioned, stated that with each discharge of urine there was a slight discharge of dark matter resembling meconium. This statement deterred me from introducing the catheter. An incision was now made along the raphe through the tubercle one and one-half inches in length, and carefully extended upwards and backwards, following the curvature of the sacrum to the depth of two and one-half inches, or as high up as the finger could reach. At this depth, the resistance being less firm, I introduced a long, narrow exploring trocar and canula and thrust it upwards, easily overcoming the little resistance; the withdrawal of the trocar was followed by a small discharge of dark-colored meconium. The entrance to the intestine was easily reached and enlarged by means of a long blunt bistoury, and this being accomplished, we were gratified by the appearance of a full and free evacuation of meconium, fæcal matter, and gas. After cleansing the wound an oiled tent was introduced, and the patient placed in its mother's arms for the night. Anæsthetics were not used during the operation.

Jan. 3. Patient passed a comfortable night, and in the early morning pulled vigorously at the breasts. On removing the tent, there followed a full evacuation of fæcal matter. Wound looked well. With each discharge of urine there was found a trace of fæcal matter. A large-sized flexible catheter was now introduced into the wound and firmly secured. The nurse was instructed to remove the same as often as every six hours.

Jan. 4. Child comfortable, evacuations free; traces of fæcal matter still appearing, ordered continuation of catheter as before.

Jan. 5. Child doing well; edges of wound healthy; little or no redness surrounding.

Jan. 7. All things appearing well, treatment was continued.

Jan. 10. General condition of patient good; evacuations natural in quantity, but not as free as at first.

Jan. 11. Since last visit, by the assistance of Dr. C. H. Harroun, a very skilful dentist of this city, I have perfected a conical-shaped bougie from dental rubber partly vulcanized, in length 5½ inches, in diameter at the point $\frac{3}{16}$ inch, at the base $\frac{5}{8}$ inch. This rubber instrument being only about half vulcanized, has a smooth surface and is very flexible; at this visit this instrument was introduced about ⅔ its length, but not without causing considerable pain and straining. I secured the bougie in position, and instructed the nurse to remove it after a few hours, to permit an evacuation, and then to replace it.

Jan. 14. The passage to the rectum is now well open; patient doing well; ordered only occasional application of bougie.

Jan. 25. All traces of fæcal matter in the urine have disappeared; in fact none has been seen in the last week. I now considered the patient in a safe condition, and after ordering two applications of the bougie every 24 hours, withdrew, promising an occasional visit to the child.

March 1. Saw patient this morning, and found him well and much grown; discharges from the bowel natural in appearance, regular and passed without pain; advised occasional application of instrument.

Nov. 12, 1872. Patient thriving, and is in all respects equal to children of his age; has no trouble either in retaining or passing fæces from rectum, the sphincter being in full force and action. At the date of operation no attempt was made to draw down the intestinal mucous membrane to secure attachment to the integument. The artificial passage now appears well lined with the natural membrane.

Case II. I saw, Jan. 26, 1869, at the instance of Dr. H. N. Schuetzer, a child born in his practice with imperforate anus. Child small and feeble, weighing about four lbs. This child too was of German parentage, born on the afternoon of Jan. 25, and operated upon on the morning of the 26th. To appearance, locally, this case did not differ materially from the first case, except that there was not present the navel-shaped tubercle. Operation similar to that upon No 1, without aid of anæsthetics or application of catheter; cutting was carried up to full length of finger, well pressed up, but without reaching the gut; and there being no change in the resistance or any feel of fluctuation, the prospects of successful termination in this direction doubtful, it was decided to make a statement of the condition of affairs to the parents. This explanation brought out the fact, that since the birth of the child it had steadily refused to take anything into its stomach, and that with this refusal there was apparent an inability to do so. An examination of the mouth and fauces did not, however, indicate any obstruction. I then suggested an opening into the descending colon through the inguinal region, but the prompt refusal of the parent prevented further effort.

Jan. 27. Child died about 10 A. M. Autopsy showed the rectum entirely absent, the colon floating with its extremity pointing towards abdominal walls, and to the right. An exploration of the œsophagus satisfied me of the existence of an obstruction or constriction. With this condition existing no successful termination could have been expected.

Case III. Child born Sept. 16, 1872, 10. A.M., in the practice of Dr. S. H. Bergen, of this city, and seen by me Sept. 17, twenty-four hours after birth. The appearance and touch of perinæum in no way differed from Nos. 1 and 2 except absence of navel-shaped tubercle mentioned in No 1. Raphe well defined; perinæum firm and unyielding. The child was held by Dr. B. Operation performed without anæsthetics or the introduction of catheter into urethra; success in my first case deciding me on this point, though fæcal matter was not found present with discharge from urethra, as before. The cutting was similar to that in Nos. 1 and 2, and extended to full length of finger well pressed up as in first case. At this depth resistance was diminished and I decided to try the sharp bistoury, and by thrusting it upwards and backwards felt all resistance disappear. Upon withdrawal I was gratified by finding a trace of meconium; wound enlarged antero-posteriorly, a large-sized elastic catheter introduced, and patient placed in bed with its mother.

Sept. 18. Patient comfortable, but not getting any nourishment; passage small; continue use of catheter.

Sept. 19. Child still refuses to nurse, and, contrary to my directions, is fed with sugar water and bits of thin cracker. Evacuations very small. Edges of wound slightly inflamed. Scrotum fully distended and red. Gave child an enema: warm water ℥ ij., which was retained. Ordered nurse to introduce catheter two or three times in next 24 hours.

Sept. 20. Patient comfortable; has had two full evacuations, and has nursed a little, but gets its main support from the sugar-water and crackers. Continued catheter as before, and urged nurse to discontinue sugar-water.

Sept. 21. Patient comfortable, evacuations natural, scrotum reduced to natural size and color, edges of wound looking well.

Sept. 22 and 23. Patient doing well. C. T.

Sept. 24. Patient not as well as yesterday; evacuations frequent and quite offensive. Ordered hydrarg. ch. mite, gr j.; opii et ipecac. āā. gr. ½; misce in ch. No. vj.; div. et sig. one powder every four hours, and to rest from application of catheter.

Sept. 25. Patient's condition still bad; continue powders; ordered sodæ bicarb.; again urged nurse to give up the sugar-water and crackers and to rely upon the mother's milk, of which she had an abundance.

Sept. 26. Case apparently without hope. Nurse persists in the use of the sugar-water. Entero-colitis fully developed.

Sept. 27. Child died. No autopsy.

Just how much the feeding of the child had to do with its death I am unable to state. I was strongly impressed, however, with the feeling that to the family the death of the child would be a welcome termination of the case.

Case IV. This child, of Irish parents like the first, was born in the practice of Dr. J. G. Nolen, Friday morning, Oct. 4, 1872, and seen by me late on Saturday evening, Oct. 5, 36 hours after birth. Raphe of perinæum well defined; the locus naturæ showed two or three small points or openings upon a dimple. These openings, however, were not skin deep. To the touch the resistance was not like that found in the other cases. From the elasticity of the parts I looked for the close proximity of the gut; upon cutting I was not disappointed. The incision did not exceed one inch in length. The gut was reached at or about an inch in depth. Before visiting this child the parents had given it three doses of castor-oil, to force, as they said, a passage. As soon as the rectum was opened there was a full and very offensive discharge of meconium and gas.

Oct. 6. Child had a good night, except that evacuations were frequent. Ordered: Pulv. ipecac, pulv. opii āā gr. ¼; sodæ bicarb. gr. xij. M. in ch. vj.; div. et sig. one powder every four hours.

Oct. 8. Child doing well; evacuations not as frequent.

Oct. 10. Patient continues to improve; but three or

four evacuations in 24 hours. Continued powders every six hours.

Oct. 25. Patient doing finely; edges of wound healed. Anus presents a natural appearance.

Nov. 27. Child continues well and thriving.

Original Lectures.

ON ACUTE ARTICULAR RHEUMATISM.

A LECTURE DELIVERED AT BELLEVUE HOSPITAL.

By AUSTIN FLINT, M.D.,

PROF. PRACTICAL MEDICINE, ETC.

[Reported Phonographically for the RECORD.]

GENTLEMEN:—My remarks to-day will be upon the subject of acute articular rheumatism, and they will be based upon the history of this man's case who is now before us. His name is P., æt. 22, Norwegian, and by occupation a blacksmith. To-day is the tenth day of his disease. I may here remark, that this disease, especially in its acute form, is not very frequently seen in this hospital. The present case does not show the disease in its acute form, for the patient is apparently approaching convalescence, yet it will serve to illustrate some of the important points pertaining to this disease. The word rheumatism is a term which has been used with a good deal of latitude, and under this name several different affections have been taken in, such as certain neuralgic troubles, certain affections of the muscles, and certain affections of the joints. When, however, we use the term articular rheumatism, we refer to a very distinct and clearly defined affection. It is a constitutional affection, characterized by local manifestations consisting in an inflammation generally affecting several joints of the body, and not infrequently fibrous structures elsewhere than in the joints. It is an affection which usually attacks the greater part of the joints of the body, and these articular affections are but the local manifestations of the constitutional disease. These local affections are in certain points distinguishable from ordinary inflammation of analogous structures. We have no suppuration, none of the inflammatory products, no production of new tissue, which we might expect in ordinary inflammation, and these are essential points of difference which characterize these local manifestations of articular rheumatism. Another point which is very striking is, the inflammatory condition frequently subsides and disappears in a very short time; one day it is present, and the next day perhaps it may be entirely gone. The occurrence of these local manifestations in different joints successively is also a striking feature of the disease, as one joint may be affected to-day, and another to-morrow. Another feature which goes to show its constitutional character, and establish what has been said with regard to the local manifestations is, the joints are affected symmetrically. The law of parallelism is strikingly illustrated in this disease; corresponding joints on both sides of the body are affected, and it is seldom that the strict law of symmetry is violated. If the joints upon both sides of the body are not affected, it does not violate the law, but it is simply the fact that the law is not illustrated. If corresponding joints are not affected, analogous ones are affected, such as the wrist and ankle perhaps, but an affection of the wrist and knee joint upon different sides of the body is rarely seen. This man is 22 years of age, which illustrates the fact that rheumatism, primarily, affects young subjects. A person, however, who has had the disease in early life, will be subject to repetitions of attacks ever afterwards, thus showing a constitutional tendency. Acute articular rheumatism also belongs among those diseases which are inherited, or rather, to which a predisposition may be transmitted. This man has generally had good health, and this is the first attack of the disease he has ever had. He was attacked in the day-time. It is more frequently the case that the patient is attacked in the night-time. The disease generally attacks suddenly, yet in a certain number of cases, the acute attack is preceded by more or less soreness and tenderness about the joints. As we look at the history of this case, we see that for two or three weeks this man had felt soreness in the joints, but not sufficient to prevent him from continuing in his occupation. The first manifestations which he had were in the smaller joints of the hands and feet; the carpal and metacarpal and tarsal and metatarsal joints. It first appeared in the right hand, then in the left foot; then in both knee-joints; then both wrists; then both shoulder-joints; and then in both hip-joints. The law of parallelism, it will be seen, was very well illustrated. At the present time the joints are comparatively but little affected. I deem it hardly necessary to dwell at any length upon the local symptoms, such as the pain and swelling which accompany the local manifestations; and will dismiss them with the simple remark, that we do not usually have much swelling and erythematous flush about the larger joints such as the hips and shoulders. I must now ask you to mark the statement which I am about to make, as it is of special importance in connection with the topic I shall presently mention. The statement is this: this man has had no pain at any time on the chest, no præcordial pain at any time during the course of the disease. I will soon speak more particularly of the importance of this statement in the history of his case. This is a disease which in its acute form—for it is presented to us both as an acute and sub-acute affection—is characterized by a good deal of febrile movement pertaining to the disease itself, and also symptomatic. One of the popular names for this form of fever is "rheumatic fever," and it is not altogether improper, for the fever does not depend upon the local affection entirely, but it is sometimes altogether out of proportion to the local affection. We have, therefore, a fever which is partly essential and partly symptomatic. Last evening this man's pulse had fallen to 72 and the temperature in the axilla was 100¼. This affords a good illustration of the disparity which is sometimes seen between the pulse and temperature, as regards the criteria of a fever. When such a disparity is present, the temperature is entitled to the preference in deciding the question of fever or no fever.

This morning the pulse was 68. It is always to be borne in mind, that, in many diseases, about the time of convalescence, the patients have a pulse which is below the average frequency in the same persons in health. This is the case in typhoid and typhus fever, pneumonia, and some other affections. This morning there is no fever present, the temperature being 98¾.

This man has been taking quinine and nitro-muriatic acid. It might, at first, strike the mind as an incongruity in the treatment of this disease to administer an acid, while the predominant feature of the disease is the presence already of an acid in the system, but really there is no incongruity in it. Over and over again we apply remedies and measures which are di-

rectly antagonistical, and each will meet its own indication, and often the only proper method of treating certain cases is to meet the indications.

We come now to speak of one of the important events which is liable to occur in the course of inflammatory rheumatism. This disease in itself, as far as the constitutional difficulty is concerned, is not dangerous to life; but there is a danger in connection with certain incidental events, and those events which are most likely to occur relate to the heart. There is a special liability to an inflammation affecting one or both serous investments of this organ, and these are the untoward events to be looked after in cases of articular rheumatism. The importance of the disease and the permanent welfare relate chiefly to the occurrence of these complications. There are some other complications which are so infrequent that they do not give us much care, and we will pass their consideration. The cardiac affections are the prominent ones. Endocarditis occurs in quite a proportion of cases, but I do not give you the figures, because I think there has been some looseness and error in making up statistics upon this point. The reason for this I will soon mention. Pericarditis is of much less frequent occurrence than endocarditis, and it may be said further with regard to these complications, that if we have pericarditis we have endocarditis, but the rule does not hold in the opposite direction. Pericarditis involves a certain amount of immediate danger, though a great proportion of cases get well. What we probably have in this case is endocarditis, and first of all we will study the evidence upon which this probability is based. The evidence in this case is not absolute, but it is *probable*. Now you will recollect the fact to which I called your special attention a few moments ago, *viz.*, this patient has not had præcordial pain, or any chest symptoms whatever, during the progress of his case. The diagnosis of endocarditis is therefore based entirely upon physical evidence. This is the reason why endocarditis is a disease which has been discovered within the last half century, and was never before known. It was discovered by physical exploration, and must continue to be recognized by this means, because it occurs without any subjective symptoms. It is associated probably with some increase of the circulation, but as this increase goes more or less with the rheumatism, we cannot draw the inference from this that endocarditis is present. How are we to determine whether a patient has endocarditis or not, who is suffering with articular rheumatism? We are to reach a positive diagnosis in this way: if the patient be under your observation, and you can determine by auscultation that there is no mitral systolic murmur present at the commencement of the attack, and then in the course of the disease a mitral systolic murmur is developed, you know that the patient has endocarditis. It all depends upon the development of this mitral systolic murmur, and the murmur is the hinging point. This patient has a mitral systolic murmur, but the diagnosis is not positive, because the patient had the same murmur when he came into the hospital, and we do not know certainly that the murmur has been developed since the commencement of the disease. It has probably been developed in this patient since the commencement of this attack, for it is the first attack the patient has had of the rheumatism; he has always been well, and as the murmur is one which does not indicate regurgitation, it is altogether probable that in this case it is evidence of endocarditis. I find here that the apex of the heart is beating in the fourth intercostal space, as it not infrequently does when the body is in a recumbent position. By percussion I determine that the heart is not enlarged. This would not be the case if the patient had had mitral disease for any length of time previous to the present attack, for he would have more or less enlargement of the heart.

Within a certain circumscribed space about the apex of the heart, I get a murmur with the first sound of the heart, a mitral systolic murmur, and it is not propagated much beyond this quite limited area. It is not proper to call this murmur a mitral regurgitant murmur, because there is no evidence of regurgitation.

What do we look for as physical evidence to show that there is regurgitation? The fact that a mitral murmur is present, is not limited to the apex, is tolerably loud, and is propagated to the left, would be evidence that it was one of regurgitation.

I also get a murmur at the base of the heart, but I attach no special importance to this, because we cannot attach much importance to a murmur at the base of the heart in a case of articular rheumatism. It is very frequently present, and is dependent upon the condition of the blood. It is always present in females, or at least, I believe I have never seen a case of articular rheumatism in a female where this murmur was not present. It is just here I apprehend that a great confusion has arisen with regard to statistics in reference to endocarditis, and many cases have been called endocarditis in which the disease did not exist. I would not make my diagnosis relying upon this murmur at the base, unless I had the mitral systolic murmur at the same time.

Endocarditis is a serious complication, because in it the rheumatism has laid the foundation for the subsequent occurrence of valvular lesions.

We have attenuation of the valves, thickening and calcification of the valves and other valvular lesions, all arising from an endocarditis in connection with rheumatism, and we have not much knowledge of endocarditis except in connection with these cases of articular rheumatism. We come now to ask the question, what are the indications in the treatment of acute articular rheumatism? In the first place we would like to cut it completely short if possible, but we cannot do this often, if ever. Next, we would like to abridge its duration, and there is reason to believe that this may be done to a certain extent. The great object, however, is to prevent these cardiac complications, pericarditis and endocarditis, for if a patient passes through this disease, and escapes these complications, he is exceedingly fortunate.

Just here, however, a knowledge of the natural history of the disease, based upon the observation of cases which have been permitted to run their course without the influence of therapeutical interference, is of value in making up our estimate of the value of treatment. In the year 1862 I conceived a plan of observing cases of articular rheumatism, without the use of medicine. The reason for so doing was because almost all the cases reported as having been under the influence of any special plan of treatment, such as mercurialization, colchicum, bleeding, blistering, &c., were reported as cured, and hence each plan of treatment was reported as being attended with the greatest success. I therefore reasoned that the probability was, inasmuch as all the different modes of treatment tended to success, that the disease itself tended towards getting well. I accordingly treated 13 cases in this hospital, and they got no remedy at all, except one which was intended for a moral effect upon the patients, and that, for the sake of giving it a name, was called the placeboic remedy. The only treatment which these patients received, aside from this placeboic remedy, was

a little anodyne and local applications to the joints of a palliative character. I resolved to continue the plan of treatment until something occurred to render it improper to continue it longer, and in only one of the 13 cases treated after this method did any complication occur, and that patient had the complication when she came into the hospital. The average duration of the disease in those cases was 26 days, and no important complications took place. I reported these cases in an article entitled "A Contribution toward the Natural History of Articular Rheumatism," which was published in the *American Journal of the Medical Sciences*, July, 1863. I hope I shall not be thought egotistical in referring to these observations. They were made in this hospital, and my object in making them was stated to the class then in attendance. So far as I know, a series of similar observations had never before been made. I am led to assert my claim to whatever credit may belong to precedence in this line of investigation, because shortly after my observations a similar plan for the same object was pursued by others. Guy's Hospital Reports, volume for 1865, contains a report of a considerable number of cases treated by Dr. Gull, chiefly with mint water; and another report of additional cases was made in an article by Dr. Gull and Dr. Sutton, contained in the "Transactions of the Royal Medical and Chirurgical Society of London," in 1869. I should not thus expose myself to the charge of egotism in asserting my claim to priority in the study of the natural history of articular rheumatism, had these observers made any reference to my article in the *American Journal of the Medical Sciences*. I feel bound to make this claim, not alone for myself, but for this hospital and for American clinical medicine.

Dr. Fuller, who is the author of the so-called "Alkaline treatment," states that cardiac complications will not arise after the alkalescence of the urine is once established, but I think this author is too ardent in his statements, for I have seen cases in which endocarditis has been developed while the patients were fully under the effect of the alkaline treatment. Statistics, however, show that there is a diminished *liability* to these complications, and therefore we are not warranted in repeating observations without remedies. The method of treatment to be pursued in a case of acute articular rheumatism, is the adoption of what is called the alkaline treatment. The prime object in this treatment is, to produce alkalinity of the urine, regarding that as the criterion that the system is sufficiently affected, in as short time as possible, for we cannot tell at what instant the complications may appear. To accomplish this the bi-carbonate of soda or potassa may be given in half-drachm or drachm doses every two hours, and by these doses you can render the urine alkaline within twenty-four hours at the farthest, with a good deal of certainty. After the urine has been rendered alkaline, the remedy is to be continued in varying doses sufficient to maintain the urine in an alkaline condition during the continuance of the disease. In this case before us, the disease has continued only ten days, and the patient is apparently convalescent.

Quinia in full doses also forms a good adjuvant in the treatment, as the patient is becoming convalescent. It contributes very much to the welfare of the patient. The joints are to be treated by palliating applications. Frequently you will find that shampooing the joints, be they never so tender, is very beneficial, commencing with gentle frictions, and gradually increasing the force as the patient can bear. Fomentations which contain alkalies and anodynes may be used also as local applications. As a rule, it is one of the great objects of medical treatment to relieve pain, for pain interferes with sleep and wears out the vital forces of the patient. Those patients afflicted with articular rheumatism may have opium sufficient to allay all irritation from pain, and give them quiet and rest. A more minute detail of the pathology of this disease must be considered at another time.

NOTE.—At a subsequent clinical lecture Dr. Flint presented a case of acute articular rheumatism during the course of which peri-endocarditis (developed when the urine was alkaline), chorea, and right hemiplegia from embolism occurred. Coincident with the occurrence of the hemiplegia, a basic systolic heart-murmur, which had previously existed, disappeared.

Progress of Medical Science.

WARM SALT BATHS IN INFANTILE FEVERS.—The difficulties which attend the use of cold baths, when it is desirable to reduce the temperature in very young children, has led Schwalbe, of Zurich, to try warm baths. His patient was a delicate rachitic child suffering from catarrhal pneumonia, and but little over a year old.

The baths contained from 3 to 5 per cent. of common salt, and were given at a temperature varying between 86° and 88° Fahrenheit. At first they were employed from once to three times daily. The child made a good recovery. Many months after a similar attack occurred, and the same treatment was adopted, with the exception only, that the baths were more frequently repeated. The child made a favorable recovery the second time. It was observed that after each bath the temperature of the body was reduced from 2 to 4 degrees.—*Memorabilien*, 1872.

POISONOUS DOSES OF CHLORAL.—The smallest dose which has produced poisoning is 2½ scruples, while 460 grains have been taken without unpleasant consequences. The symptoms are diminished frequency of respiration, redness of the conjunctiva, contraction of the pupils, lividity of the lips, and falling of the jaw. The character of the pulse has not been found to be uniform. The treatment should consist in: 1. Removing the poisonous matter or diluting it by water, tea, coffee, or other fluids; and 2. Restoring respiration. Too much reliance must not be put upon so-called antidotes, such as strychnine, physostigmine, morphine, camphorated ether and ammonia. These remedies cannot always be trusted. Possibly transfusion of blood, which has been successful in cases of poisoning by chloroform, may also prove useful in these cases.—*Med. Chir. Rundschau*, Oct., 1871.

THREE RESECTIONS OF THE ANKLE-JOINT.—Albanese, of Palermo, has published three cases in which he has performed this operation. He makes a single curved incision over the outer malleolus; the bone is removed, leaving both the periosteum and capsule of the joint entire. Two of the cases made a good recovery; the third healed, leaving a fistulous opening. Subsequently extensive caries was developed, and amputation was resorted to. In each instance the malleoli were almost completely re-formed, though they had been entirely removed. There was no bony anchylosis, but a moderate amount of motion in the joint.—*Med. Chir. Rundschau*, Nov., 1872.

FUMING NITRIC ACID FOR INTERNAL PILES.—Billroth records 26 cases of prolapsing piles treated by him in various ways. In four instances he applied the

actual cautery, in ten the galvano-cautery, and in the remainder fuming nitric acid. The latter plan was pursued as recommended by Dr. Houston, of Dublin. The results proved eminently satisfactory. His mode of proceeding was as follows: A free evacuation of the bowels was obtained by means of castor-oil given the day previously. Before the operation the mass was brought down by an injection. The patient was then placed on the side with the knees flexed. The parts adjacent to the anus were first well protected by oil so that no injury should be done them. A small piece of wood was then dipped in the acid and applied to the outside of the swollen mass, until it had become tolerably stiff and had assumed a yellowish-green color. It was then smeared with some simple form of ointment and returned within the sphincter. The operation was usually performed without an anæsthetic, and an opiate suppository was rarely given afterwards. It is proper to keep the patient in bed. Fever rarely follows, though retention of urine is not uncommon for the first few days. The eschar usually separates without loss of blood. It is proper to give castor-oil on the third or fourth day, provided no fæces have passed. Hemorrhage will be likely to occur if the fæces become hardened; such accidents, however, are readily controlled by ice. Of the patients treated in this way some were discharged on the 5th and 9th days, though severe cases were under treatment from six to eight weeks. Several of the patients were examined a year after the operation, and there was no stricture in any one of them.

Billroth believes that in very severe cases this treatment may fail, and then suggests the use of the acid nitrate of mercury, as recommended by Curling.—*Wiener Med. Wochenschrift*, No. 35, 1871.

Embolism in Endocarditis.—The following statistics have been compiled from the records of the Pathological Institute in Berlin. They are the results of autopsical examinations in 300 cases of endocarditis that were observed between the years 1868 and 1871. The lesions were confined to the valves in nearly every instance; disease of the parietal endocardium occurred only once. The affection was limited to the right side in 1 per cent. of the cases, in 9 per cent. it was associated with similar trouble on the left side. In 10 per cent. the left valves were the only ones diseased, but in 89 per cent. the right valves were also affected. The following facts were also ascertained:

The tricuspid was diseased alone in 1 per cent. of the cases, and with others in 10 per cent. The pulmonary was not diseased alone, but in 1 per cent. with other valves. The mitral was alone affected in 52 per cent., with others in 85 per cent.; the aorta alone in 13 per cent., with others in 43 per cent.; 29 per cent. of all the cases were complicated with emboli. In 2 or 3 per cent. of these the trouble originated in the right side of the heart and produced infarctions and abscesses in the lungs, chiefly in the lower lobes.

In 26 per cent. the emboli were derived from the aortic circulation. In the 76 cases of this nature, the mitral was affected in 87 per cent., and the aorta in 49 per cent. The following is the ratio of relative frequency with which emboli occur in three different organs: In the kidneys in 75 per cent.; in the spleen in 51 per cent.; in the brain in 20 per cent.; in the intestinal tract and in the liver in 7 per cent.; in the skin in 5 per cent.; in the medulla in 3 per cent.; and less often in the thyroid gland and eye.—*Med. Chir. Rundschau.*

A New Nasal Speculum.—Wimmer, of Dresden, claims to have invented a new instrument of this kind, which he believes has certain advantages over any other now in use. It is, in fact, merely a modification of the ordinary wire speculum for the eye. Instead, however, of having extremely short arms, it has very long ones, and in addition is provided with an adjusting screw to regulate the amount of distention in the spring. It is self-sustaining, dilates the nares very completely, does not touch the sensitive septum, and is extremely simple in its mechanism. In introducing it, the spring is to be compressed by the finger and a single arm is to be passed into each nostril.

On removing the pressure from the spring the arms will spread widely apart and hold the alæ well distended. The adjusting screw, by regulating the amount of distention, will render the instrument available for smaller or larger cavities. Wimmer further states that the instrument remains firmly in place and causes little or no inconvenience. Both hands are free, and by the aid of the aural or laryngoscopic mirror, the parts can be thoroughly inspected and operations can be performed with greater ease and precision.—*Algemein. Med. Central. Zeitung*, Dec., 1872.

Injections into the Brain Substance.—H. Nothnagel (*Centralblatt*, No. 45, 1872) gives a method by which the functions of various parts of the brain may be studied. It consists of injecting a concentrated solution of chromic acid through a small hole in the skull, by means of a subcutaneous syringe. The part injected becomes green and hard, and surrounded by partial encephalitis. The function of the part is completely destroyed, while the lesion is exactly circumscribed. Nothnagel has made over a hundred experiments, the animals living from eight to fourteen days. He promises to publish his results soon.

Influence of Belladonna on Sweating.—In some interesting communications to *The Practitioner*, Dr. Sidney Ringer brings forward an abundance of evidence to prove that belladonna and its active principle are able to check and prevent sweating, whether the result of disease or induced by exposure to an elevated temperature. In the former case his observations enabled him to conclude that one two-hundreth of a grain of atropia injected under the skin is generally sufficient to check sweating for one night. This dose produces dryness of the fauces, but does not dilate the pupils. Stramonium, it was found, is able to exert the same influence.

Hyosciamia.—Dr. Oulmont, Physician to the Hôtel Dieu, Paris, has published recently in the *Bulletin de Thérapeutique* the very interesting results of experiments with this principle, which possesses the active principle of the drug and is very much more reliable as an agent. He found that the effects produced by hyoscyamus itself not only varied with the dose employed, but even with equal doses according to the mode of preparation; the part of the plant used, and even with the season of gathering, the mode of drying, etc., etc. Sometimes with very feeble doses he got symptoms of poisoning; on other occasions large doses produced no results. In his experiments on patients with the alkaloid he always used the commercial hyoscyamia known as mereko, which is a brownish syrupy liquid. It was always administered either in pills containing one fifty-fourth grain (one milligramme) or in hypodermic injections of aqueous solutions, varying from 1 to 4 per cent. strength.

The result of physiological experiments were:

1. Hyoscyamia has a manifest action on the circulation; in small doses it diminishes it, in large doses it

paralyses it. All the general phenomena are due to modifications of the capillary circulation, and disappear rapidly, the drug being eliminated very quickly.

2. Hyoscyamia has no action on the nervous system of the life of relation; the sensibility is not modified; nevertheless it is weakened by large doses.

Dr. Oulmont insists upon the fact that it does not directly act on sensibility. In an animal which has taken large doses, neither the mixed nor the sensitive nerves, the posterior roots in the cord, nor the posterior columns can be irritated without extreme pain.

This experimental fact appears to contradict clinical observation, which proves the happy effect of hyoscyamia upon pain, particularly neuralgia.

A *resumé* of the effects of hyoscyamia when used for the relief of disease are given as follows:

1. Hyoscyamia represents all the active principles of hyoscyamus. The fixity of its composition gives to the results which are obtained from its use a precision which hyoscyamus in substance does not yield in the same degree.

2. Hyoscyamia should be given at first in weak doses (one thirty-two grain daily), either in pills or by hypodermic injection. The dose may be gradually increased to five or six times this quantity.

3. The remedy must be continued even if there are slight symptoms of poisoning, such as dryness of the throat and dilated pupils. But if the symptoms become grave, it must be suspended, and the symptoms being temporary, will disappear in a few hours.

4. Hyoscyamia exerts a favorable action in spasmodic and convulsive neuroses. It cured mercurial trembling in cases where every other remedy had failed. It produced a notable improvement in senile tremor and paralysis agitans.

5. Its action in locomotor ataxy was null.

6. In traumatic tetanus, although the patient died, this remedy produced a sufficiently notable remission of the symptoms to leave the question of its power still open and to call for new experimentation.

In-Fleshed Toe-Nail.—Dr. B. E. Cotting, Harvard (*Boston Medical and Surgical Journal*, January 2, 1873), gives a new operation for this painful and persistent affection, with illustrations, which consists in removing all the diseased parts, together with quite a large piece of the sound flesh, skin deep, from the side of the toe—sometimes making an open wound, say nearly an inch long by half or three-fourths of an inch wide. No portion of the nail need be removed; but if, in order to fully secure all the diseased flesh, overlapping or undergrowing, a segment of the nail is involved in the cut, no harm comes of it. The result, he states, is quite as good, perhaps better. By this operation, all the diseased parts are removed at once, and a clean, healthy wound substituted; to be treated as any other open freshly-cut wound, and to be allowed to heal as soon as possible by granulation. Generally, the healing is rapid, and without interruption. In the second place—and this is the principle on which success depends—as the comparatively large and superficial wound heals there is a contraction of the parts, and a drawing-in of the skin towards the centre from all sides, including that near the nail; so that when the wound is healed there is nothing left in the way for the nail to impinge upon its subsequent normal growth. The shape, also, of the toe itself is usually much improved by the operation.

Diarrhœa in Teething.—In a clinical lecture "On the Primary Dentition of Children," by Francis Minot, M.D., Harvard (*Boston Medical and Surgical Journal*, January 2, 1873), in speaking of the diarrhœa complicating teething during hot weather, recommends the common chalk mixture with the addition of one-fourth part of tincture of kino, which increases its astringency, and also keeps it from turning sour in hot weather. If the diarrhœa be not checked by this mixture, one drop of laudanum may be added to a dose, but not oftener than three times a day, in children under two years old. Diarrhœa is most apt to attack children who are brought up on the bottle; hence, if the case be urgent and do not yield to treatment, a wet-nurse should be procured if possible. When this cannot be done, he would strongly recommend the method of preparing the milk with arrow-root and gelatine, found in the treatise on "Diseases of Children," by Drs. Meigs and Pepper. Brandy is very useful to a teething child exhausted by diarrhœa, which should be given once in three or four hours, or oftener in urgent cases. The dose is ordinarily from five to twenty-five drops, given in milk; but if there be much prostration the physician need not fear to increase the amount.

The Horse Epidemic of October and November, 1872.—Albert Fricke, M.D., of Philadelphia (*Philadelphia Medical Times*, January 4, 1873), read a paper on this subject before the Biological and Microscopical Section of the Academy of Natural Sciences, with a statement of microscopical appearances of specimens, by Prof. Joseph Leidy, in which the results of the post-mortem examination, and those of the microscopic investigations of the lesions found in the nares, pharynx, glottis, larynx, and trachea, the presence of false membranes in the named parts, seemed to point to the conclusion that this disease is allied to the epidemics of diphtheria of the human family. The acute anæmia so generally observed is another proof of the diptheroid character of this epidemic. Out of thirty thousand horses owned in Philadelphia, over twenty-two hundred and fifty died in less than three weeks.

Amputation at the Knee-Joint.—John H. Brinton, M.D., surgeon to the Philadelphia hospital (*Philadelphia Medical Times*, December 28, 1872), in performing amputation at the knee-joint, always ties the popliteal vein. Whether a tendency to hemorrhage be owing to the firmness of the tissues by which the vein is surrounded, to its numerous branches, or, as Mr. Cardew has suggested, to the jar of the popliteal pulsation, he cannot tell, but certain it is, it is pretty sure to occur unless precautions are taken. He has yet to see the first evidence of trouble. In his cases the condyles of the femur were left untouched. Although there is but little difference in the mortality rate of the aggregate of cases, of all cases in which the condyles have been left, and of all those in which they have been removed in whole or in part, still that difference he states is in favor of the former method.

Fluid Extract of Castanea Vesca in Pertussis.—Thomas D. Davis, M.D., of Dayton, Ohio (*Philadelphia Medical Times*, December, 28, 1872), speaks of an epidemic of pertussis which broke out in the winter of 1870, while a resident physician in the Philadelphia Children's Asylum, in which the fluid extract of chestnut leaves was successfully used. This remedy was advocated before the American Pharmaceutical Association, in 1862, by Mr. George C. Close, of Brooklyn, N. Y. He has tabulated fifteen cases, so that there can be seen at a glance the number of paroxysms in each case while on the use of belladonna, without it, and the improvement for five days after using the other remedy. Dr. Davis says that Mr. Maisch, of Philadelphia, is the only druggist there who has reliable preparations of this article. The leaves are gathered from

July to October, the preference being given to those procured late in the season. The following is Mr. Maisch's formula for making the fluid extract: Chestnut leaves dried, cut, and bruised, sixteen ounces; glycerine, five ounces; sugar, eight ounces; and hot water, a sufficient quantity; the extract to measure sixteen fluid ounces. The dose is half a teaspoonful to a teaspoonful every three or four hours for a child six years old. In urging this remedy upon the notice of the profession, he does not claim for it a specific action, but thinks it will be found a valuable antispasmodic and expectorant, the preparations of which are not unpleasant, and are readily taken by children.

Antiseptic Injections and Drainage Tubes in Empyema.—Edmund Andrews, M.D., Professor of Surgery in Chicago Medical College (*The Medical Examiner*, December 15, 1872), noting the great success of carbolic acid injections in arresting the purulent secretion, and consequent exhaustion and hectic of large abscesses, he determined to try it in a case of empyema, in which the patient had been stabbed in the back part of the left chest. The wound was closed, but effusion occurred, which became purulent, and discharged through a fistulous orifice, remaining after the tapping of the cavity. The opening was so small and crooked that his first effort to inject carbolated water into the fistula was unsuccessful. He then anæsthetized the patient and made a good-sized opening into the chest between the ribs where the fistula lay, and about a quart of pus gushed out. A piece of small rubber-tube was inserted and tied in. Through this tube large injections of carbolated water, ten grains to the ounce, were freely thrown once a day. By this treatment the secretion of pus had been almost arrested; at the date of report, the patient was growing fat and vigorous, and was already able to take long walks. The cavity was quite small, and bid fair to be safely obliterated.

The Natural Cure of Disease.—Sam'l G. Armor, M.D., of Brooklyn, N. Y. (*N. Y. Med. Journ.*, Jan. 1873), has a lecture on this subject, being replete in sound sense, and an introductory to the discussion of therapeutics. He emphasizes the following rules of practice:—1st. Never administer a drug of any potency without a definite purpose—that is, without a clear indication—for drugs never occupy neutral ground. 2d. Never use more medicine than is requisite to produce the effect which is intended, and continue it no longer than is absolutely necessary. In closing, he would enforce these truisms:—It is the duty of the physician to restore health by the simplest means in his power. To know the natural cure of disease is more than half of therapeutics.

Case of Occluded Vagina.—Dr. W. T. Lusk, of New York (*N. Y. Med. Journ.*, Jan. 1873), records a case of occluded vagina; labor at full term; forceps; and resuscitation of stillborn child by Schultze's method. The latter plan, unfamiliar to many, is thus described:—The operator seizes the child under the arms, the index-finger of each hand in the armpit, the thumbs over the anterior portion of the trunk, the remaining fingers placed along the back, which is turned toward the operator, while the head is steadied between the palms of the hand. As the operator stands up, the child, so held, is allowed to swing between his outspread knees. The tractions thus made in both directions upon the ribs, by the pectoral muscles above, and the abdominal muscles below, produce the widest reparation of the ribs, while the weight of the liver causes descent of the diaphragm, and thus inspiration is produced. Next, with extended arms the operator swings the child upward until the breech and legs fall forward toward the abdomen. When the body is thus doubled up, the ribs close together, the diaphragm is pushed forward, and forcible expiration takes place, driving out through the month and nostrils great quantities of mucus and fluids — when respiratory movements have taken place previous to birth—from the air passages. Still keeping the arms extended, the child should be allowed, after a few moments, to swing back between the legs. In this way expiration and inspiration are to be maintained, until spontaneous respiration occurs. As the temperature is apt to fall during the swinging movements, warm water should be kept handy, in which to occasionally plunge the child. The child thus resuscitated lived two days, crying most of the time.

Chloroform Poisoning.—Two cases of chloroform poisoning are related by Samuel C. Busey, M.D., Washington, D. C., in the October No. of the *American Journal of Medical Sciences*. In the case of a child, aged 4 years, and the case of an unmarried lady, aged 30, who swallowed large quantities of the anæsthetic, both recovered, following the usual remedies, with application of Chapman's ice-bag to the spine. So far as he is aware, there has been but one death reported from chloroform narcotism, the details of which are found on page 108, vol. 2d, Stille's *Therapeutics and Mat ria Medica*.

Locomotor Ataxia.—D. E. Dickerson, M.D. (*Kansas City Med. Journ.*, Dec., 1872), relates two cases of this affection which were successfully treated with nitrate of silver.

ARTICLES IN OUR EXCHANGES.

SURGERY.

Popliteal aneurism cured by ligature of femoral artery, after failure of compression. Walshe, D. *Med. Press and Cir.*, Jan. 1.

Penetrating wound of abdomen; extrusion of a portion of great omentum; recovery. MacDowell. *Ibid.*

Traumatic pericarditis. Farquharson. *Ibid.*

Fracture of pelvis. Davy, R. *Ibid.*

Cystic tumor of forearm, resulting from a blow. Bell, R. *Ibid.*

Dislocation of the patella on its edge. Bellamy, E. *Br. Med. Jour.*, Jan. 4.

Diseases of the antrum. Vans Best, A. *The Lancet*, Jan. 4.

Compound comminuted depressed fracture of the skull, without symptoms; operation; recovery. Pemberton, O. *Ibid.*

Tumor in the thigh, resembling aneurism; treatment by antiseptic ligature of the femoral artery; death sixteen weeks afterwards from gangrene. Jessop. *Ibid.*

Two cases of extroversion of the bladder. Wood, J. *Ibid.*

Aneurism of the transverse part of the aorta. Johnson, G. *Ibid.*

Encysted hydrocele. Moxon. *Ibid.*

A method of plugging the posterior nares. Taaffe, R. P. B. *Ibid.*

Case in which Allarton's median operation was successfully performed for the removal of an entire gum-elastic catheter from the bladder. Stokes, W. *Irish Hosp. Gaz.*, Jan. 1.

Extensive compound and comminuted fracture of the skull. Kidd, A. *Ibid.*

Cases of stricture of the urethra (illustrated). McDonnell. *Ibid.*

Fracture of the base of the skull. Bennett. *Ibid.*

Dilatation of the kidneys, etc., consequent on stricture. McSWINEY. *Ibid.*

Fibro-sarcomatous tumor of the face. STOKES, W. *Ibid.*

Entero-vesical fistula; muscular fibre as an urinary deposit (illustrated). RICHARDSON, W. *Dublin Jour. of Med. Sci.*

Direct scrotal hernia, with multiple sacs; both testes at the upper and anterior part of the hernia; suspensory bands in one of the sacs (illustrated). RICHARDSON, W. *Ibid.*

Colles's operation for the relief of stricture at the orifice of the urethra (illustrated). RICHARDSON, W. *Ibid.*

Intimate mixture of cancer with enchondroma (illustrated). RICHARDSON, W. *Ibid.*

Self-amputation of genital organs. BARTON. *Ibid.*

Hematocele of very long duration; suppuration at the orifice of the sac from injury; castration. BARTON. *Ibid.*

Lithotrity for vesical calculi. PORTER. *Ibid.*

Two cases of intra-capsular fracture of the neck of femur (illustrated). SMITH, R. W. *Ibid.*

Renal tumor (illustrated). LITTLE, T. E. *Ibid.*

New method for the surgical treatment of ozena. *Bulletin de la Suisse Romande*, Nov.

Sub-ungneal exostosis of the great toe. REDARD, P. *La France Med.*, Jan. 4.

Pyæmia. RANVIER, VULPIAN, HAYEM. *Le Mouvement Med.*, Jan. 4.

Septicæmia. LIONVILLE, LABORDE, VULPIAN. *Ibid.*

Leeeh in the pharynx. DANLOS. *Ibid.*

Contractions of the lower extremity of the rectum, and their cure by incision (*rectotomie linéaire*). VERNEUIL. *Gaz. Med. de Paris*, Jan. 4.

Urethro-prostatic calculus; "button-hole" operation; recovery (illustrated). GROSS, G. *Gaz. Med. de Strash.*, Jan.

Rare tumor of lower jaw successfully removed without division of the bone (illustrated). ANNANDALE, T. *Edinb. Med. Jour.*, Jan.

Hypospadias with cleft scrotum, believed to be a female till fourteen years of age. GRAHAM, T. *Ibid.*

SYPHILIS AND DERMATOLOGY.

Hydroa of probable syphilitic origin. HUTCHINSON. *Br. Med. Jour.*, Jan. 4.

Eczema rubrum—importance of its diagnosis. HARDY. *Jour. de Med. et de Chir. Prat.*, Jan.

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Bright's disease. GULL, W. *Ibid.*

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Two cases of circumscribed pulmonary gangrene from hemorrhagic infarction, the result of submersion; frequent hemoptyses; recovery. FOOT, A. W. *Dublin Jour. of Med. Sci.*, Jan.

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Empyema of left side, passing behind the internal arched ligament into the left psoas muscle, and thence into vertebral canal; deposition of lymph and pus upon the posterior surface of the theca vertebralis. FOOT, A. W. *Ibid.*

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Poisoning by petroleum; treatment by large doses of coffee and turpentine frictions; recovery. BUFFIERE. *Jour. de Méd. et de Chir.*, Jan.

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Set of sisters, with families, who had never any milk in their left breasts. YOUNG, J. *Ibid.*

Zymotic diseases as affecting obstetric cases. CAIRNS. *Ibid.*

THE MEDICAL RECORD:

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THE WORK OF OUR HEALTH DEPARTMENT.

THE present is a fitting time to take a retrospective glance at the doings of the Health Department which for the past three years has controlled the sanitary interests of the Metropolis. That its administration has been barren of much of the good that was expected of it is now quite apparent. Although the principal causes of inefficiency were due to its faulty organization, to the preponderance of the lay over the medical members, and the political character of its general management, a good deal was left undone by the members of the Board which might have been done to give it that decent measure of usefulness and that practical proof of good intentions which were implied by the very taking of the respective offices and the receiving of the large salaries paid.

The responsible officers of the Board are the Commissioners, six lay and two medical—the Health Officer of the Port being an ex-officio member. Of the lay members we had no reason to expect much, every one believing that they filled such positions by virtue of their qualifications as politicians. In regard to the medical members, however, even allowing for the disadvantage of their being in the minority, we are forced to say that we expected more, but the results of their labors prove a mortifying disappointment. If they have accomplished anything which in a professional sense can be considered of real utility, anything which reflected any special credit upon the profession which they represented, we have yet to hear of it, the reports of the Sanitary Committee to the contrary notwithstanding. This, too, is not owing to the lack of ability of either of the members of the said committee for writing occasional reports and making them finished compositions. In view of the totally negative results of their administration it is certainly unfortunate for their reputation as practical sanitarians that they should have accepted such responsible positions. We say this in all charity to their good intentions, and in appreciation of their desire, with the other members of the commission, of performing the arduous duties of their office with satisfaction to themselves by meeting once a week as a board, and once a week in committee. We are willing to give them the credit also of never complaining of being overworked or of being dissatisfied with the salaries received.

Allowing for all these qualifying circumstances, some have gone so far as to say that the office of Health Commissioner has been a sinecure, and we hope we may not be considered as partial to the verdict of the majority of the profession, and public, on this point, by saying that they have altogether the best side of the argument. Perhaps we can state the case more mildly by saying that these positions were purely political and were given to the different gentlemen more on account of their skilful political manœuvring than for any other qualification.

No matter what may be the cause, we are forced to admit the result that the Commission have been utterly incompetent to control the operations of their department, to the extreme mortification and disgust of such as have an unselfish interest in the sanitary welfare of our city.

What has been lacking in one quarter has, however, been made up in another. The bureaus of sanitary inspection and registration, by the actual hard work performed, have, in reality, been the only means of saving the reputation of the department. Although the labors of these bureaus are freely appropriated by the Commissioners, it is but simple fairness to the gentlemen having charge of them, and their willing and overworked assistants, to state that they in reality have done the only work worthy of mention, or deserving of credit. Dr. Moreau Morris, the former Sanitary Inspector, and Dr. Janes, the present Sanitary Inspector, have been main standbys, as has also Dr. C. P. Russel, the accomplished, scholarly and indefatigable Registrar of Records. These gentlemen have been the true heads, medically speaking, of the Board, and have, by their ability and conscientious regard to duty, given to it all the executive life it ever had.

Those who have done the hardest work of all, but who have received the least credit and the least pay, are the Inspectors and Assistant Inspectors. What is lacking in the capacity for work in the Commissioners is fully compensated by the thankless drudgery of twenty young medical gentlemen whose whole time, in consideration of a mere pittance, is taken up in the inspection of tenement houses, cellars, privy vaults, stables, and in the performance of labor which, if not menial, is certainly degrading. These duties are well enough in their way, and may be indispensable, but

they could have been performed to equal good advantage by a sanitary policeman—a layman in every sense of the term. Owing to the political pressure brought to bear upon the Commissioners, and their desire to create a public sentiment in favor of their continuance in office, the extra work thrown upon these overworked inspecto rshas been, as shown by the number and voluminousness of their reports, to be simply enormous. But this was a political exigency, and must be accepted accordingly.

We contend that the work which has been assigned to the inspectors has not been fitting for medical men to perform. As we have said before, any one of ordinary intelligence can do all the unprofessional duties. How much better would it have been if some duties which, as medical men, they could take a pride in performing, had been assigned to them. There were plenty of opportunities offered for strictly scientific work, and yet there has been almost nothing of the sort done since the organization of the Board.

This has been one of the many instances of the want of foresight in the Commissioners. By assigning strictly scientific work to these inspectors, exceedingly valuable services to the cause of sanitary science could have been made available, and would have been the means of giving a dignity to the working of the Board which it very much needed. Very many questions could be answered by intrusting their solution in detail to a corps of enthusiastic young men, men who would take an interest in the work, an interest which we never can hope to be fostered by the inspections of privy vaults, cesspools and similar duties. Contrary to what might have been expected of a board which above all others should have placed a premium upon medical services, we find that every attempt has been made to degrade the profession in the eyes of the public, and that the medical members of said board have had neither the influence nor the inclination to counteract the tendency. The inspectors have been kept very hard at work and have received very poor pay, while the Commissioners have accomplished little or nothing, and have received very large salaries; but, from a political stand-point, what is fairer than that?

ARTICLES IN OUR EXCHANGES.

We have created in our present number a new department which we have reason to hope will be of service to our readers. It is impossible to present, in a certain amount of space, abstracts of all the papers published in our exchanges. We shall endeavor in our department of Progress of Medical Science to give such epitomes of papers as shall be of real utility to the general practitioner, at the same time giving to those gentlemen who wish for information on special objects the opportunity of seeking for the same in the journals in which the papers concerning them are orginally published.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, Dec. 18, 1872.

Dr. A. L. Loomis, President, in the Chair.

Dr. Post presented a melanotic tumor which he had removed from the cheek of a woman aged sixty. A similar growth had been removed from the same patient a year before. The disease had not affected her general health, neither were there any symptoms of cancerous cachexia present.

Dr. Stimson exhibited a malignant tumor of the kidney removed from an infant.

MYOCARDITIS.

Dr. Sands presented a specimen of myocarditis, with the following account of the case:—

This specimen was removed on Sunday last from the body of a gentleman, a resident of this city, who died very suddenly on Saturday afternoon. I was not his physician at the time of his death, although I had seen him some years previously on account of a surgical difficulty, and knowing him well, was invited to be present at the autopsy. The account which I am able to give of the patient has been obtained from his physicians, Drs. Purdy and Otis.

The patient was fifty-six years of age at the time of his death. No history of previous disease is obtained, except that many years ago—more than twenty—he suffered from a severe attack of acute rheumatism. This disease did not recur, and he was considered to enjoy robust health up to within six weeks of the time of his death. It might also be stated as interesting, in connection with the fact that he died of heart disease, that he was able to go up several flights of stairs with considerable ease, and used to say that he was "long-winded." About six weeks before he died he was exposed to cold and wet, and subjected to some mental excitement and subsequent depression, occasioned by the death of a friend. The disease which followed seemed to be a bronchitis, which did not for the time being make him ill enough to be confined to the house. Three weeks after exposure and about three weeks previously to his death, he was taken with a chill and sent for Dr. Purdy, who attended him for about two weeks for what he supposed to be an attack of pneumonia, Dr. Otis attending in consultation. The symptoms of which he complained were not very distinct as pointing to pneumonia. He had pain, which was referred to the precordial region and extended thence to the region of the left shoulder. This was the only symptom which led to the suspicion that the heart might be the seat of the disease. Careful examinations were made by both Dr. Purdy and Dr. Otis without discovering any physical signs of cardiac trouble. I am told that there was no cough. He had some fever, the pulse was 120, the temperature 102°, and physical examination revealed what were thought to be indications of pneumonia, affecting chiefly the right lung at its base, and involving the left side. Although none of the pathognomonic signs of pneumonia were present, the principal sign was observed on the left side, and consisted of crepitation and dulness, which is said to have extended over a large portion of the back of that lung. He was never very ill, and in short, after being sick in bed for ten days, he recovered, and Dr. Purdy ceased his attendance. I think about ten days before the patient died, Dr. Purdy

made a last friendly visit. Subsequent to this he had not left his room except to drive out once or twice. On Saturday, about half-past twelve P.M., he was seen in his studio, apparently as well as usual, by a servant who went to get him his lunch; and bringing it in half an hour after she had seen him, she found him reclining on the lounge, with his head thrown back, excessively pale, and having a lifeless expression. She not supposing him to be dead, but very ill, ran for a physician, and Dr. Purdy, who was called, says that he reached the house of his patient five minutes after the messenger. When he arrived the patient was dead, and it was not certain that he had not been dead for some time.

A post-mortem examination was permitted, and it was suspected that he had died of apoplexy. I was invited to be present, and remarked that, though he might have died of apoplexy, it was exceedingly infrequent that apoplexy produced such sudden death; accordingly I was not surprised to find an entire absence of any considerable disease of the brain.

The brain was first examined, and there was no disease in the interior of the cranial cavity, excepting a slight atheromatous patch at the bifurcation of the vertebral into the two posterior cerebral arteries.

On opening the thorax and abdomen, no organs excepting the heart and lungs exhibited any signs of disease. The pleura of the right lung near the base was adherent to the costal pleura, and also, I think, to the diaphragm. There were no marked indications of previous pneumonia; perhaps none at all were found in either right or left lung. This is perhaps not strange, insomuch as so long a time elapsed since the acute disease showed itself.

On opening the pericardium, which was found to be a little difficult on account of old adhesions to the heart, it was at once seen that both the pericardium and heart were the seats of disease. The adhesions were chiefly on the anterior and left surfaces of the organ. These adhesions were evidently the result of old disease. A portion of the front of the heart was not affected by adhesions; this portion was the front of the left ventricle pretty close to the posterior thickened border of the heart. What attracted attention at the time was the presence of a very considerable ecchymosis of recent date beneath the pericardium, covering the front of the left ventricle of the heart. The heart was examined *in situ* and the cavities opened, in order to discover if there existed the presence of a thrombus in any of the large vessels springing from its base, but none was found. The heart cavities were moderately distended. When the incision was made to the left of the ventricular septum, to open the left ventricle, Dr. Curtis came upon what he thought to be an abscess or cavity in the heart-walls. Subsequent examination proved this impression to be erroneous. The disease proved to be one of myocarditis. The inflammation of the muscular tissue of the heart was confined to the left ventricle and to the septum between the two ventricles. The heart-wall was thickened to some extent, not, however, by hypertrophy of the proper tissue, but by adventitious deposit, and this is seen to be present, first, on the exterior of the heart where the blood is noticed, and secondly, on the interior of the heart where there is a very thick deposit of laminated fibrine. Dr. Delafield, who examined the specimen after its removal from the body, expresses the opinion that the fibrine on the internal surface of the heart was not effused from the endocardium. On subsequent examination we thought differently. I seized a tissue, evidently distinct, which I peeled off from the effusion underneath. In this patch (pointing to a particular portion of the specimen) the exudation measures in one direction, corresponding with the long diameter of the ventricle, at least three inches, and in the opposite or transverse direction not quite two inches. The texture of the heart intervening between the external and internal clots is evidently very much altered; it is of an ashy color, exceedingly porous, tears readily, and in the direction of the layers of the ventricular walls. There is a considerable amount of atheromatous deposit upon the mitral valves; the coats of the artery and sinuses of Valsalva are studded with many spots, most of them atheromatous. It does not seem that the valves were insufficient to perform their functions. It was also noticed in the examination, and was considered by Dr. Delafield as an element in the causation of the disease, that both coronary arteries were degenerated and more or less obstructed. The right coronary artery is calcified very close to its origin—its walls are so altered that they give quite a ring when struck with the forceps. It contained no thrombus. The left coronary artery was more diseased than the right. It has been examined in its descending and principal branch—the transverse has not been cut into, but it is found to be pervious. The descending branch is very much diseased for an inch and a half of its length. Here (pointing to a particular part of the vessel) the atheromatous deposit is seen in great abundance. Here is a clot, evidently not of recent date—a thrombus—three-quarters of an inch in length, extending from a point where the main artery divides in two principal branches, and almost completely occludes the artery at that point.

Cases of this disease are sufficiently rare to be of interest; and I noticed, in reading Aitken's Practice with Dr. Purdy, that Aitken makes the remark that myocarditis, apart from acute rheumatism (in which case it is evidently different from what it is here), has no clinical history. In Rindfleisch the disease is spoken of as rare, the clinical history of which does not correspond with the gravity of the disease or the importance of the organ affected. It is considered probable that the disease of the heart, myocarditis, depended upon the degeneration of the coronary arteries, the atheromatons especially preventing a due supply of blood to the heart, leading to inflammation, with the successive changes of muscular tissue degeneration, and abrogating its function.

It is remarkable that during life, not only no physical, but no rational signs of the disease showed themselves. The absence of valvular disease would explain the absence of valvular murmur. It is exceedingly remarkable that such an amount of disease in the left ventricle should exist, without having caused any impairment of function of the heart previously to the fatal event itself. Disease of the heart was suspected when the pain was complained of in the præcordial region, but careful auscultatory examination by Dr. Purdy and Dr. Otis failed to detect any valvular murmurs, or any irregularity in the heart's action.

Dr. Peters remarked, that in looking over the Transactions of the Society since '44, there were certainly nine cases of myocarditis reported. None of these had had clinical history, some cases terminating in the so-called aneurism of the heart. In regard to the obstruction of the coronary artery, he remarked: Last winter a gentleman whom I had known for many years, and apparently in perfect health, brought his brother to me with disease of the heart and kidney. An unfavorable prognosis was given and death occurred within two months, when suddenly my well friend complained of an attack very characteristic of angina pectoris, coming on after some exertion. He

had been so well before, that, although I gave him very strict directions about diet and exercise, I did not apprehend anything very sudden in his case. About ten days afterwards he was attacked at night and died very quickly. An autopsy was made by Dr. Janeway, when an entire occlusion of the right coronary artery was noticed.

Dr. Loomis thought, that in Dr. Sands' case the effusion of blood underneath the endocardium was the initial lesion preceding the inflammation of the muscular tissue—an opinion in which Dr. Sands concurred. He also remarked that the recovery from pneumonia was as complete in so short a time as if no pneumonia had existed.

Dr. F. V. White presented a specimen of dilated aorta, tuberculosis, and pulmonary œdema, removed from a male, aged 74, who had died suddenly from the latter disease.

The Society went into Executive Session.

Stated Meeting, January 8, 1873.

Dr. A. L. Loomis, President, in the Chair.

Dr. Delafield reported that the specimen presented by Dr. Hamilton at the previous meeting, and supposed to be malignant disease of bone, proved, on examination, to be osteomyelitis. A detailed account of the microscopical appearances were given.

CANCER INVOLVING RETRO-PERITONEAL GLANDS AND TESTIS.

Dr. Keyes presented an abdominal tumor and testis, the latter removed by operation from a patient of Charity Hospital, aged 23, single, and a laborer by occupation. He was admitted into the institution Oct. 17, 1872. No history of any hereditary predisposition could be obtained, but the patient had the delicate pink complexion indicative of a general unsound condition. He was a left monorchidis, his right testicle never having descended. Four months before he entered the hospital, and after an attack of gonorrhœa, the left testicle began to enlarge and become painful. The patient stated that the enlargement began at the lower end and posteriorly. The increase in size and tenderness continued for a period of thirteen weeks, when the disease remained stationary and he presented himself to the hospital for treatment.

The testicle was examined by Dr. Keyes and several other gentlemen, and found composed of two distinct portions, the lower and inferior portion measuring ten and a half inches around, giving a sense of fluctuation; the upper portion, much smaller, was firm and quite smooth. The cord and seminal vessels were uninvolved. The general condition of the patient was much below par; he had some cough at night; there was a loss of appetite for food, all erotic desires were absent, and he was in a very desponding state of mind. One of the gentlemen thought that the tumor was cystic, and it was tapped accordingly by an exploring needle being attached to a hypodermic syringe. No fluid was, however, extracted. This operation was performed in the latter part of October, before Dr. Keyes came in service. After the puncture the testicle began to enlarge quite rapidly.

When Dr. Keyes took the service, Nov. 1, the patient was clamorous for the operation of castration. By this time the skin covering the tumor had become reddened, but it was not adherent. His appetite was still poor, and his cough became more urgent and distressing. No night sweats were present. The lungs were examined, not very critically, however, but a certain amount of flatness and moist râles were discovered on the right side at the apex, which circumstance gave rise to a general opinion that the disease of the testicle was tuberculous in character. An operation was accordingly refused, but the patient being still importunate, Dr. Van Buren was asked to see the case. He confirmed the diagnosis, and it was decided, after explaining the probable results to the patient, to remove the testicle. No examination was made of the abdomen. The question of cancer was discussed; but no enlarged glands or any other suspicious evidences of the existence of such a disease being discovered in the inguinal or other glands in the neighborhood, the idea was abandoned.

The operation was performed Dec. 1, 1872. The incision was made in the usual manner from above the external ring down through the scrotum, and the testicle was easily enucleated. The spermatic and deferential arteries were tied, when a ligature was placed around the whole cord. There was very little bleeding from the vessels of the scrotum. The scrotum was sewed up in the usual way.

The patient had a very slight chill, but no considerable disturbance. His appetite began to improve, and everything went well until the 13th day, when he began to complain of great tenderness in the left inguinal region, which soon spread over the abdomen and developed into peritonitis. In the course of twenty-four hours the whole of the abdomen was tender and tympanitic, and he died in forty-eight hours.

The extirpated testicle was found to consist of two portions; the upper hard, the lower soft. The upper and posterior portion was made up, for the most part, of three spots of a yellowish-white appearance and hard, looking like spots of chronic inflammation. There were also little cavities on the upper portion which were filled with cheesy deposit, and some with pure pus. The lower portion consisted of a large number of small cysts with a thickening of intertrabecular tissue.

The autopsy was made by Dr. Maxwell. The lungs were found to be healthy, but there was a mass of new growth overlying the pericardium, and attached by one extremity to the inner free border of the upper lobe of left lung. The peritoneum was extensively inflamed. Behind it and a little to the left of the median line, in the upper portion of the abdominal cavity, and overlying the spine, were found two large-sized tumors, evidently taking their origin in the retro-peritoneal glands. When cut into, the substance resembled brain tissue interspersed with more or less cystic growth. The right testicle was found just outside the abdominal ring and entirely atrophied. No microscopical examination of the specimen had been made.

Dr. Krackowizer did not think that there was any connection behind the abdominal tumors and the disease in the testicle, the latter of which seemed to be purely inflammatory in character.

Dr. Keyes, inasmuch as the disease of the testicle was principally in the secreting portion of the organ, and inasmuch as it presented in such a marked degree the gross appearance of encephaloid disease, was inclined to differ with the foregoing opinion. The tumor had not yet been examined microscopically. Dr. Delafield was inclined to agree with Dr. Keyes as to the nature of the tumor in the testicle.

CURIOUS SARCOMATOUS TUMOR OF CHEST—AN INTERESTING QUESTION OF DIAGNOSIS.

Dr. Jacobi exhibited a specimen of lungs and an nexa taken from the body of a child five years of age

who died in a public institution a short time after having suffered from dyspnœa.

He made the autopsy, when a very beautiful and characteristic exhibition of the autopsical appearances of extensive diphtheritic inflammation of the air-passages was shown. The lung in some portions was collapsed, and in others gave evidences of lobular pneumonia.

A second specimen, presented by Dr. Jacobi, also, consisted of the chest contents removed from a child, aged four years, who, according to the mother's account, had always enjoyed good health until a short time previous to death.

About the 20th of Nov. she noticed a slight swelling of the face and body, accompanied with a slight cough. The condition of the child did not in her opinion warrant medical advice, and it was not until the 26th, when the cough had increased and the dyspnœa became more urgent, that a physician was called in. The medical man saw the child several times during the ensuing week, in the course of which time (30th) the mother had occasion to see the child entirely uncovered, and then, for the first time, she noticed that a large number of the external blood-vessels were considerably swelled, and nearly in the same condition in which Dr. Jacobi saw the child, in consultation, sixteen days afterwards. The mother positively asserted that no such appearances were ever present before this accidental discovery. Dr. Jacobi first saw the child Dec. 14th, late in the evening, and found that the chest and a portion of the back were covered with a large number of blue veins—very thick—most of them large vessels, and the communicant veins very much distended. Parallel with the linea alba, and on either side of it, there were three veins, thicker than the rest, and between them a number of communicant veins. In the inguinal and renal regions, and in every direction over the upper portions of the thigh, the same varicose condition existed. The jugular vein was also large, but not pulsating, and the veins over the shoulder and scapula were likewise involved.

The child had the delicate skin and conformation of the chest peculiar to rachitical subjects. There were râles all over the chest, and dull percussive sound anteriorly and posteriorly over upper part of chest. The heart sounds were heard near the left nipple and over a limited space. A dull percussion sound extended in a diagonal direction from about one inch to the left of the mamma to the manubrium sterni—thus giving a triangular space of dulness similar to what is found in hydrops pericardii. There were rhonchi and râles all over the chest. The diagnosis then made was extensive pneumonia of right lung, especially posteriorly, and also hydrops pericardii. From the mother's positive assurance that the child had been well up to the 20th of November, and from the fact that the child had a slight swelling of the face in the beginning, and the urine being free from albumen, it was further presumed that there had been an attack of myocarditis; that in consequence of which deposits had taken place in the heart, that the right auricle had become obstructed, and also in turn the venæ cavæ, and that in consequence of the latter there was the general varicose condition described.

The temperature was 103½. The child died the day after. The autopsy made quite an unexpected revelation, and not only proved that there had been a mistake in the diagnosis, but that the positive assertions of patients' friends are not always entitled to absolute reliance.

The heart was a little enlarged. The pericardium was distended and filled with two ounces of liquid effusion. The lungs were compressed and found in the posterior portion of the chest, where there were slight adhesions. In the median line, a little more to the right than the left, was found a sarcomatous tumor, embedded into the substance of which were the bronchi and all the large vessels at the base of the heart, the latter organ being pushed aside. The tumor probably originated in the lymph glands of the mediastinum and was of fœtal origin, the positive statement of the mother to the contrary notwithstanding.

The Society then went into executive session.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, Dec. 23, 1872.

Dr. Ellsworth Eliot, President, in the chair.

The following gentlemen, recommended by the Comitia Minora, were granted certificates of membership:—

John J. Mason, No. 20 East 25th st., a graduate in medicine at the Bellevue Hospital Medical College in 1869; W. H. Vermilyea, 241 East 21st st., a graduate in medicine at the College of Physicians and Surgeons in 1870; W. H. Katzenbach, 35 East 35th st., a graduate in medicine at the Bellevue Hospital Medical College in 1871; Paul F. Munde, a graduate in medicine at Harvard College, Mass., in 1866, and University of Vienna, Germany, in 1871; J. E. Ferdinand, a graduate in medicine at the University of New York, Medical Department, in 1868; Ezra R. Pulling, a graduate in medicine at the College of Physicians and Surgeons in 1853.

DEATH OF MEMBERS.

The Secretary then read, in behalf of the Committee, the following:—

Whereas, It has pleased an all-wise Providence to remove from the sphere of his usefulness our associate and professional brother, Dr. Galen Hunter, who for many years was a member of the Medical Society of the County of New York:—

Resolved, That we record our testimony to the purity of his character, his usefulness, and the integrity of his whole life;

Resolved, That a copy of these resolutions be preserved in the archives of this Society; and, also, that a copy, signed by the President and Secretary, be sent to the family of the deceased.

Committee, { W. N. Blakeman, S. T. Hubbard.

The resolutions were adopted.

Dr. Stephen Rogers announced the death of Dr. Augustus Woolfarth, a member of the Society; and moved that a committee be appointed by the President to prepare suitable resolutions.

The President appointed Drs. Rogers and Finnell.

REPORTS OF COMMITTEES.

Dr. Goodwillie then read the report of the Meteorological Committee; after which Dr. Russell presented that of the Committee on Diseases.

Following the report, Dr. R. Russell read some interesting statistics which had been collected by Dr. Judson, of the Board of Health, relative to the recent epidemic among horses.

The first cases of the disease occurred on Sept. 30th, 1872, at Toronto; and in other cities in the order indicated:—

Ottawa, Oct. 7; Montreal, Oct. 11; Buffalo, Oct. 15; Detroit, Oct. 18; Boston, Oct. 20; Bangor, Oct. 20; New York, Oct. 21; Albany, Oct. 23; New Haven, Oct. 23; Providence, Oct. 23; Quebec, Oct. 25; Burlington, Oct. 26; Philadelphia, Oct. 26; Baltimore, Oct. 26; Cleveland, Oct. 26; Hartford, Oct. 27; Chicago, Oct. 28; Washington, Oct. 29; Titusville, Oct. 29; Pittsburg, Oct. 29; Norfolk, Oct. 30; Richmond, Nov. 2; Wilmington, Nov. 4; Charleston, Nov. 4; Cincinnati, Nov. 8; Louisville, Nov. 9; Lynchburg, Nov. 9; Wheeling, Nov. 12; Savannah, Nov. 15; Columbus, Nov. 16; Indianapolis, Nov. 17; New Orleans, Nov. 26; Galveston, Nov. 28; Houston, Nov. 30; St. Louis, Nov. 30.

Dr. L. D. Bulkley read the report of the section on Dermatology and Syphilis, of the Committee on Intelligence, following which the President appointed Drs. Rogers and Finnell a committee to draw up suitable resolutions with reference to the death of Dr. Wohlfarth.

The paper of the evening was then read by Dr. Wm. J. Moses, who undertook to explain the occurrence of puerperal convulsions in some cases by the effect of pressure exerted on the ureters at the base of the bladder during the passage of the child's head, stoppage of the discharge of urine, distention of the pelves of the kidneys, interference with the renal function, and consequent retention of urea in the blood. This, he thought, might be the exciting cause at least in a considerable proportion of the cases in which convulsions took place during or immediately following labor. He cited several cases in proof of this theory, and was asked by Dr. Jacobi if all, or a majority of them, could be accounted for on this ground.

Dr. Moses thought they could, and said that in every case he had observed convulsions came on when the head was low down, and ceased when the head was extracted.

Dr. Jacobi asked how he would explain cases where convulsions occurred previous to labor.

Dr. Moses supposed them to be due to hysteria, anæmia, or to other causes about which we know but little.

Dr. Jacobi then made somewhat extended remarks upon the causes which have been assumed to produce eclampsia; touching upon the theories which assign to albuminuria, urea, and carbonate of ammonia, the chief causative influence. He also directed attention to the disposition which exists in many persons to convulsive affections, in which cases a very slight cause may sometimes be sufficient to awaken a convulsion, and of these pressure on the pelvic nerves, rather than on the ureters, might, he thought, be the one to blame.

Dr. Moses thought that much might be gained in a practical way by admitting that the cause he had mentioned might be the one in existence, and treating the woman accordingly.

Dr. Hubbard was very much pleased with the paper, but was not prepared to accept Dr. Moses's ingenious hypothesis as a correct theory. He was himself disposed to attribute eclampsia to an uræmic origin; did not believe that chloroform was a proper remedy, but would resort to the use of the lancet at the outset.

Dr. Moses repeated that he advanced the theory to account for a great many, and not all of the cases, and remarked that to put a lancet into the veins of an anæmic patient would lead to results quite as unfavorable as the convulsion itself.

Dr. Merrill thought that if pressure upon the ureters during labor could be a sufficient cause of eclampsia, it might also produce it during the latter months of pregnancy.

Dr. J. C. Peters remarked that in a large class of these cases we may find chronic bronchitial disease present, and in this class the convulsions may occur as early as the sixth month, and cannot be distinguished from convulsions in males under similar circumstances. Although many cases of eclampsia occur in those whose urine contains albumen, we also see a large number in which the albumen does not appear until after the convulsive attack. The class of so-called nervous cases is by no means small. Dr. Peters had of late placed a good deal of importance upon the condition of the function of the skin as having causative influence. In the treatment of the affection he had always had fear of and prejudice against the use of opium on account of its producing a congestion of the circulation in the brain and kidneys, but was aware that the use of morphine hypodermically had become the standard plan of treatment in Bellevue Hospital.

He deprecated any attempt to explain the condition by any *one* cause, and was disposed to await further research before accepting any one of the causes mentioned as *the* correct one.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 6th, 1873.

Dr. Austin Flint, President, in the Chair.

Dr. W. B. Lewis was made a Non-Resident-Fellow.

THE DEATH OF DR. JAMES L. BROWN.

The late Dr. James L. Brown was to have opened the discussion on abortion with a paper on the "Causes, the Prevention, and the Treatment of Abortions," but his remains were interred on the day of the meeting. The President said that the quotation "in the midst of life we are in death" is often remarked, but seldom was it so truthfully exemplified as in the death of Dr. Brown. An opportunity was given to the members for remarks on his death.

Dr. T. Gaillard Thomas said that the announcement of his death took the members by surprise, as he was ill only three days. He mentioned the following particulars concerning the cause of the illness and death: He returned home Thursday evening, January 30th, after his daily round, not feeling well, but commenced writing his paper for the Academy. That night he had a chill. On Friday morning he had another chill; when Dr. Thomas saw him his temperature was 104¾°, and pulse 130. He belched forth lumps of bile. Dr. B. thought he was going to have typhoid fever. On Sunday his pulse was 118, and temperature 101; pneumonia was developed. On Monday the speaker recognized the fact that all hope of saving him was lost; his pulse was from 140 to 150. The signs of pneumonia were well developed in the posterior portion of right lung. Oxygen gas was administered to keep him alive on Monday night. At a quarter before ten on Tuesday morning he died, aged 42 years.

The speaker remarked that the deceased was one of the noblest and most upright men in our profession. He knew him intimately for seventeen years. More than any one else, Dr. Brown built up the Clinic of Obstetrics and Diseases of Women and Children in the College of Physicians and Surgeons. His mental traits were strong, concise, and intense. He had a hard battle in life, and for this he desired justice for all his friends and enemies. Another strong trait was his

entire devotion to duty, and he never turned aside from its path. For his friends he had strong affection, and his loyalty to them could not be surpassed. Professional success was just dawning upon him at the time of his death. As an ovariotomist he would have proved a prominent man. He had already performed two cases of ovariotomy, and was a thorough diagnostician. Dr. Thomas said he was bankrupt in thanks to the departed member, and this affair made the whole profession as one. He moved that a committee of three be appointed by the chair to draft appropriate resolutions.

Dr. Peaslee stated that he had been intimate with Dr. Brown for ten years. His physical, moral, and intellectual capacities were great. In the whole domain of gynæcology not a single point could be raised with which he was not thoroughly acquainted. He was always willing to give up an opinion if he found that he was wrong. The speaker never saw a fairer man. In regard to diagnosis, he would consider the subject twice before taking an opposite opinion to the deceased. When Dr. Brown applied to him for position as his assistant in the Demilt Dispensary, he believed he remarked that he had been through all the other departments in that institution. The deceased, for two of the summer months, had annually taken charge of the speaker's practice (the department of gynæcology and obstetrics) with credit to himself and satisfaction to his patients. Intellectually and morally, he came up to as high standing as he ever saw. The whole truth was never known by the profession concerning him.

In closing, Dr. P. said that the age of from forty to forty-two was the critical period of the medical man. At that age the physician does not then know what is before him. Those of the age of forty, or thereabouts, should wait and let the future come to them—leaving that to Providence. He hoped that the resolutions would be passed that evening.

Dr. James Anderson stated that his acquaintance, though not intimate, was a pleasant one. He particularly exhorted the young and the old to prepare for death, if they had not already done so. He hoped that the thought "that life is not ended here, but is to go on," would occupy their thoughts by day and night.

Dr. Jerome C. Smith reminded the Academy of his sincere honesty; and in early days, when an attempt was first made to remove the masks from the faces of some physicians in establishing the "Medical Register," Drs. Brown and Bibbins did more to put it on a firm foundation than anybody else. Dr. Brown always remembered the other side when subjects were discussed at the meetings of the Medico-Historical Society. He spoke of the great credit due the late member for his devotion to that work.

Dr. Chamberlain said that he could not record such an intimacy with any other member as with Dr. Brown, and the more he was associated with him the more he found him to be the ripe scholar and high-minded man. In all his positions he had great regard to medical attainments. No man, physically, was marked for a longer life than the deceased. He has gone from us and left a bright and noble example.

The President appointed Drs. Thomas, Chamberlain, and J. C. Smith as a committee to draft resolutions. These were subsequently presented and unanimously carried. They have been already published in our journal.

DISCUSSION OF ABORTION.

The President called upon Dr. Peaslee to give some information concerning the views of Dr. Brown on the subject of abortion.

Dr. Peaslee remarked that he called at the residence of deceased, and found that among other points jotted down in the opening of the paper, he would have shown that fibroid tumors and pelvic peritonitis were causes of abortion. The opinion advanced by Dr. Church, that abortion from habit was a cause, he coincided with. In his recorded cases of habitual abortion he was not able to find out any other cause. To illustrate the fact that fibroid tumors was a cause, he had recorded one in full. Dr. Brown thought that placentitis as a cause had been carried too far.

Dr. Peaslee, in speaking for himself, said he had never seen an inflammation of the placenta. He exhibited an interesting specimen of placenta from a woman six feet high and weighing 170 pounds. Just such women were very liable to miscarry at four or five months of pregnancy.

The patient had originally retroflexion, which was arrested. For several years past she habitually aborted at about the fourth or fifth month. She desired to have a child. Her physician, thinking the cause was placental disease, ordered tinct. ferri chloridi and chlorate of potassa three times a day. Afterwards he saw Dr. Peaslee and thought the child was dead. The pyro-phosphate of iron was then given to the end of the term. The speaker doubted whether this preparation arrested placental disease, but it certainly gave better blood to the mother and child. When the child was a fortnight old the patient died from puerperal convulsions. The wife was changed for the daughter.

Dr. Cabo agreed with the author of the paper and the last speaker in the belief of habitual abortion as a cause. Working on the sewing-machine, and fatty degeneration of the placenta, were denominated as causes. Chlorate of potash had been given to one of his patients, but without avail. One of the best means of relief, he thought, was the use of morphia, when there is a certain amount of rigidity of the os, which is a sign that the ovum will pass away. Certainly he would never use ergot, as it causes rigidity.

Dr. W. C. Roberts, in his remarks, spoke as follows concerning the treatment: When the blood is flowing pretty freely, I should at once introduce the sponge tampon, apply ice, urge rest, and ergot, if you like, as a hæmostatic; or better still, opium to arrest contraction. When the os is open and the neck distended, and muscular efforts and contraction has begun, the abortion cannot probably, as Burns says, be prevented. I do not share the fear that some have that the tampon, by confining the blood within the uterus, increases the tendency to contraction by distending the uterus. I do not believe the coagulation goes up far enough. I should never rupture the membranes, as the chance is better while they remain entire of the whole coming away together; whereas, in the other event, the fœtus, big or little, comes away, the womb contracts, and the placenta remains behind. Perhaps, anyhow, a blighted fœtus, etc., may be left behind to be expelled at a later period, perhaps as a mole or in a hydatid condition. The woman will surely abort if the membranes are ruptured; when the life of the fœtus is destroyed from any cause, it must come away, and the sooner the better, as the woman may then conceive again. It happens sometimes, when hemorrhage and pain cease and the os is closed, that the life of the fœtus may be preserved, and the pregnancy go on. Hemorrhages are not infrequent in the early months, which do not interrupt the progress of pregnancy.

Dr. Chadsey considered plethora of the uterus one of the causes of abortion, and in his experience venesection gave relief.

Dr. Thomas was appointed to read a memoir of Dr. Brown. The Academy adjourned.

Correspondence.

DISLOCATION OF PATELLA UPON ITS AXIS.

[The following letter was sent to Prof. F. H. Hamilton, of this city, who has kindly placed it at our disposal.—Ed.]

Dear Sir:—On the 14th inst., at 7 P.M., I was called into the country, a distance of eight miles, to see Miss Minnie P., a farmer's daughter aged seventeen, short and stout, who had received an injury five hours before from a fall from a chair, while endeavoring to wash the wall near the ceiling. I arrived at 8 P.M. and found the patient lying just where she had fallen, on three chairs held by two frightened women, and crying at the top of her voice. In this condition she had been since the fall, some eight hours previously. Upon examining her leg, which lay partially flexed on a chair, I found the patella dislocated by being rotated on its axis inwards, the inner edge lodged in the inter-condyloid depression of the femur, and the outer one standing perpendicular to the plane of its articulating surface.

At once I endeavored to reduce by grasping the bone and canting it over; but to my surprise such a manœuvre had not the least effect upon it except to cause the girl to scream still louder. And again and again, with flexions and extensions, did I try to reduce the dislocation. By this time what seemed at first sight to be trivial, suddenly assumed grave proportions. And I at once resolved to give chloroform, of which I had the precaution to take a bottle along. She passed readily under its influence, and all fear, pain, and muscular rigidity disappeared. With the limited help at hand, two women and a boy, we carried her across the room, by tugging at her shoulders and legs our best, and as she sank heavily, limp and apparently lifeless, on the bed, I grasped the knee, intending to embrace this favorable time for operating, but to my utter surprise and delight the patella had completely reduced itself! I had never seen a luxation of the knee, and had never to the best of my memory read or heard of a similar case. But on returning home I read your article on "dislocations of the patella upon its axis," and found cause to be satisfied with my success in comparison with the treatment of the three you gave—one by Watson, New York, one by Dr. Joseph P. Gazzam, of Pittsburg, Pa., and the other from Sir A. Cooper's work. Yours, truly, H. Hunt, M.D.

Beloit, Jan., 1873.

SULPHO-VINATE OF SODIUM IN CONSTIPATION.

To the Editor of the Medical Record.

Sir:—About two years ago Dr. A. Rabuteau, of Paris, made some experiments with the sulpho-vinate of sodium, and published in the *Gaz. Hebdom.*, June, 1870, the results of these experiments, which were first made upon animals, and afterwards upon himself and his patients. I was so pleased with the conclusions of the author, that I had some of the drug imported for me by Messrs. Eimer & Amend, of this city, and commenced to use it.

The first invoice was a small one and did not correspond exactly with the description given by Dr. Rabuteau. I wrote to this eminent physiologist, asking him at the same time to send me a sample of his sulpho-vinate; but he answered that he had not any, and that he had abandoned the use of this drug on account of its being difficult to keep, and also of its rather high price. I then ordered through the same firm a new invoice, and this last, made by Merk of Darmstadt, answers perfectly the description by Dr. Rabuteau.

It is a salt resembling very much sulphate of magnesia; it is deliquescent when exposed to the air, very soluble in water and in glycerine; its formula is $Na\ (C^2\ H^5)\ S\ O^4 + 2\ H^2\ O$.

It does not, like other salts, produce constipation after passing into the blood, and is eliminated rapidly. It operates at a dose of three or four drachms for an adult, and children even take it very easily; it is administered in Seltzer water, or better, in water with an addition of syrup of lemon, and thus makes a very pleasant drink. It has not the inconvenience of salts of magnesia upon old people or persons subject to calculi.

It is believed to be the best substitute for citrate of magnesia (which is now so impure), or Seidlitz powders, as these generally produce subsequent constipation; and as to the price, one dose will not cost one half of the citrate.

I have used this preparation for over two years, and have made it my standard prescription in cases of chronic constipation, or whenever I need a mild or saline cathartic.

P. De Marmon, M.D.

Kingsbridge, January, 1873.

IS IT NECESSARY TO LIGATE THE FUNIS?

To the Editor of the Medical Record.

Sir: This question, I am aware, has already been decided in the affirmative by most of the profession, but there are some who still contend that it is useless, and should therefore be abandoned. It is to the latter I would especially address this communication. It does appear to me that this question would be forever determined could it be shown that a serious hemorrhage was liable to result from neglect of this simple procedure, and that it was impossible to anticipate the result in any given case.

A few days since, I was called to a babe 36 hours old, at whose birth a midwife had officiated.

She had applied two ligatures to the umbilical cord, and had divided on the placental side of both. The manner of applying these, viz., by wrapping round and round with fine cotton, and tying the extremities, was such that, just prior to my being called, both ligatures became loose. Upon reaching the child I found one ligature entirely removed, while the other did not constrict the cord in the least, and, as the result, a child literally bathed in its own blood. Upon removing the binding, blood spirted at least three feet. The child was blanched, the extremities were cold, and there was every indication that, unless the hemorrhage be checked, the child would speedily die. A stout cord was immediately applied, and the bleeding ceased. After advising the nurse as to the clothing and nourishment of the child, I left. He has since done well.

What I wish to deduce is this: If hemorrhage be possible in a case where two ligatures had been applied, and where both remained for thirty-six hours, is not the danger greatly increased where no ligature is applied?

JOHN T. KING,
A. A. Surgeon U. S. Army.

POST OF SUMTER, S. C., March, 1873.

MECHANICAL TREATMENT OF CONSTIPATION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the *London Lancet* for July 25th, 1872, Dr. C. Hilton Fagge, assistant physician to Guy's Hospital, reports a case of intestinal obstruction, which had lasted for five days, and was then relieved by kneading of the abdomen in conjunction with enemas. Dr. Fagge refers to the dangers which might arise from manipulations of the bowels in cases where inflammation and destruction of tissue is in progress, as, for example, in intussusception, and evidently regards the employment of such means in this instance to have been hazardous. Still he says: "It can hardly be doubted that the life of the patient was saved by the kneading of the belly, carried out by his medical attendant; and so satisfactory an issue in this case may well encourage other surgeons to adopt a similar procedure." It has occurred to me that I might render some service by calling the attention of practitioners to this remedial agency, and indicating in a brief way the method of employing it.

A trained manipulator commences the local treatment of constipation by a friction, more or less vigorous, of the abdomen for several minutes. This is followed by the kneading of the abdominal muscles from their origin to their insertion, and by what are technically known as percussion, clapping, chopping, vibration, etc. These preliminaries are intended to promote the nutrition of the abdominal parietes, which is usually much impaired, to the end that the important assistance of healthful abdominal muscles may be secured in promoting a regular action of the bowels. The abdominal viscera are then subjected to their proper treatment. The knees are drawn up or not, according to the condition of the abdomen, and the half-clenched fists of the manipulator are moved about from five to fifteen minutes exactly as are those of the cook who kneads dough for the oven. Then follow vibrations, which are given by placing the palm of the hand on the umbilicus and imparting a series of shocks to the abdominal contents, and percussion over the liver and spleen by the palm or clenched fist. Lastly, the course of the large intestine is followed out by deep pressure with the fingers, kneading, and friction. While these varied manipulations, and others less important, are useful in making thorough the treatment, and in accomplishing special results in particular cases of dyspepsia and constipation, still the simple application of kneading alone is quite sufficient to reach a great deal of the constipation for which the physician is to prescribe. To perform this little, special training is necessary on the part of the operator. Any intelligent servant or friend of the patient, or even, in some instances, the patient himself, can give his intestines and abdominal organs a thorough and vigorous shaking up for a few minutes every day. It matters not how this is accomplished. The method employed in kneading dough answers admirably, and is often all-sufficient.

A great deal of the constipation which the medical man is called upon to treat in our cities is due solely to want of suitable exercise. It should therefore be treated, not by cathartics, but by muscular exercise, in the way of walking, horseback riding and the like, or else by some artificial substitute, when the former are insufficient or cannot be employed. Nature intends the contents of the abdomen to receive a great deal of shaking, jostling, and compression, and without these the healthful action of the viscera is impaired and nutrition suffers. An active man breaks his leg and is confined to the house by the necessary treatment. At once he begins to be troubled more or less with constipation, headache, loss of appetite and dyspeptic symptoms, which distress him throughout the period of confinement, that would be irksome enough in itself. Or, a lady of fashion, whose muscular exercise is chiefly restricted to the effort of dressing, and who seldom goes out of doors except to ride in her carriage, is constantly annoyed by shortness of breath, dyspepsia, constipation, and hemorrhoids. These, and similar instances, may generally be relieved, and often entirely cured, by a vigorous kneading of the bowels, once or twice a day, from ten to twenty minutes.

After having secured a regular action of the bowels in cases of habitual constipation, resulting from sedentary habits, I recommend the patient to carry on the treatment, by employing every morning certain active and passive movements, which tend to agitate the ventral contents and to maintain a healthful state of the abdominal muscles, and then to apply vigorous friction with a coarse towel or flesh brush to the abdomen, flanks and back, at least; if not, to the extremities as well. I have also found that decided benefit may be obtained in such cases by the assumption of the squatting position by the patient during defæcation. This is undoubtedly the natural posture for this act. In it all the muscles which come into play in impelling the fæces can be exerted to far greater advantage than in the sitting position which civilization has adopted, and especially is this true of those perineal muscles whose office it is to expel the remnant of the fæces at the lower part of the rectum.

A great deal more might be added about the treatment of dyspepsia by general and localized movements, alone or in conjunction with internal medication, electrization, etc. But my object has been to call attention to the mechanical method of treating constipation. Its general introduction into practice would tend to relieve many people from a great deal of distress, save their digestive apparatus from injury by cathartics, and take away some of the petty annoyances of the physician.

WM. R. FISHER, M.D.

100 W. 53RD STREET.

New Instruments.

A NEW SPLINT FOR FRACTURES OF THE FORE-ARM,

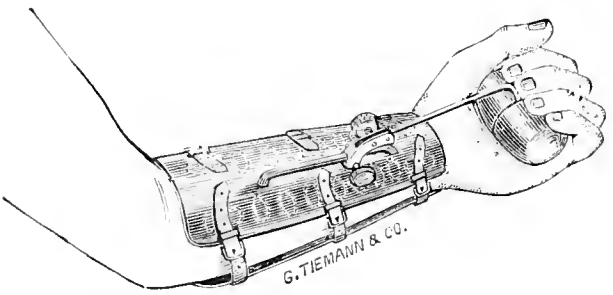
AND ESPECIALLY DESIGNED FOR FRACTURE OF THE RADIUS NEAR THE WRIST-JOINT.

BY HENRY S. HEWIT, M.D.,

VISITING SURGEON TO CHARITY HOSPITAL, CLINICAL PROFESSOR OF SURGERY UNIVERSITY MEDICAL COLLEGE.

THIS splint is intended, in addition to its function as a simple retentive splint, to give support to the hand and

to obviate the danger of partial loss of mobility in the wrist. A few words of explanation in addition to the information conveyed by the accompanying cut may be necessary. The wooden ball grasped by the hand is connected by a rod to a slender bar running longitudinally upon the face of the splint, and capable of being flexed at any desirable length. The rod is attached to the travelling connection by an universal joint giving play to the ball in limited movements of flexion, extension, pronation and supination. The natural tendency is for the patient to make these movements, and to perpetually relax and contract the fingers. The splint upon the inner surface of the arm



is antagonized by a plain flap-splint on the outer surface, extending to the superior border of the wrist-joint. This splint has been used for upwards of two years by myself and others, particularly by Dr. W. T. White, at the Demilt Dispensary, and has given good results. As to my own experience, I have found this method more satisfactory to myself and more comfortable to the patient than any I have hitherto employed, and I beg leave to recommend the instrument to the profession for the purpose of testing its advantages and utility.

129 E. 29TH ST., MARCH 3D, 1873.

ARMY AND NAVY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from March 4, 1873, to March 18, 1873.

CAMPBELL, JNO., Surgeon. Granted leave of absence for 30 days. S. O. 41, Department of the East, March 3, 1873.

BILL, JOSEPH H., Surgeon. To report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 54, A. G. O., March 14, 1873.

MACKIN, CHAS., Assistant Surgeon. Assigned to duty at Yorkville, S. C. S. O. 45, Department of the South, March 4th, 1873.

KIMBALL, J. P., Assistant Surgeon. Relieved from duty in the Department of the Gulf, and to report to the Commanding General, Department of Dakota, for assignment to duty. S. O. 52, C. S. A. G. O.

DELANY, ALFRED, Assistant Surgeon. Leave of absence extended two months. S. O. 51, A. G. O., March 11, 1873.

EWEN, C. Assistant Surgeon. To report to the Commanding Officer, Department of the Gulf, for assignment to duty. S. O. 55, A. G. O., March 12, 1873.

NEW YORK ACADEMY OF MEDICINE.—At the stated meeting, April 3d, Prof. A. L. Loomis will read a paper on "Acute Uræmia."

Changes in the Naval Medical Corps, from February 1st, 1873.

Medical Director W. S. W. RUSCHENBERGER. Waiting orders.

Medical Director J. M. FOLTZ. Naval Hospital, Philadelphia.

Medical Director WM. MAXWELL WOOD. Inspector-General Hospitals and Fleets.

Surgeon HENRY C. NELSON. Recorder Naval Medical Board.

Medical Inspector S. F. COUES. Navy Yard, Portsmouth.

Medical Inspector ALBERT L. GIHON. Special duty, Bureau of Medicine and Surgery.

Medical Inspector EDWARD SHIPPEN. Waiting orders.

Pd. Asst. Surgeon HENRY STEWART. Naval Station, New Orleans.

Surgeon F. E. POTTER. Receiving Ship, Portsmouth, N. H.

Surgeon SOMERSET ROBINSON. League Island Navy Yard.

Pd. Asst. Surgeon H. M. RUNDLETT. Iron Clad Terror.

Surgeon J. H. CLARK. Waiting orders.

Asst. Surgeon S. W. LATTA. Waiting orders.

Surgeon A. A. HOEHLING. Sick leave.

Surgeon THOMAS C. WALTON. To "Juniata."

Asst. Surgeon H. C. ECKSTEIN. Ordered home.

Asst. Surgeon EDWARD EVERS. To "Narragansett."

Surgeon B. F. GIBBS. To "Richmond."

Asst. Surgeon E. C. THATCHER. Resigned.

Medical Inspector ALBERT L. GIHON, as Surgeon of the Fleet on the European Station, June 1st.

Medical Items and News.

NEW YORK ACADEMY OF MEDICINE.—At the stated meeting, April 17th, Prof. William T. Frink will read a paper on "The Etiology and Indications for the Treatment of Irregular Uterine Action during Labor."

BOYLSTON PRIZES.—The Boylston Medical Society of Harvard University have awarded the Boylston Prizes to the following gentlemen: First prize to Thomas Morgan Ratch, for an Essay on "The Emigration of the White Corpuscle in Inflammation." Second prize to Walter Ela, for an Essay on "Fractures of the Elbow-joint."

THE brain of the late Napoleon III. weighed only forty-seven ounces.

PRESERVING TUMORS, ETC.—The "New Method of Preserving Tumors and certain Urinary Deposits," by Jos. G. Richardson, M.D., Lecturer on Morbid Anatomy in the University of Pennsylvania, is reprinted from the Philadelphia *Medical Times*, and is well worth studying. It gives an excellent plan for securing the portability of microscopic specimens.

MERCER COUNTY MEDICAL SOCIETY, N. J.—This Society has elected for the present year the following officers: *President*, C. Shepherd, M.D.; *Vice-President*, John Woolverton, M.D.; *Secretary*, J. B. James, M. D.; *Treasurer*, J. L. Bodine, M.D.

Bowdoin College, Maine.—Robert L. Packard has been appointed Assistant Professor of Applied Chemistry in Bowdoin College.

Hopkins Hospital.—This hospital, to be built in Baltimore, has a fund of two millions of dollars, the bequest of the late Gerard Hopkins.

Holland.—The celebrated English physician, Sir Henry Holland, is 84 years old, being the senior Fellow of the Royal Society.

Mahomet-Ali-Bey.—This Arab surgeon, who has cured the mother of the Khedive of Egypt of a serious malady, has received from his patient a fee of five thousand dollars, and has been raised by the Viceroy to the rank of a Pasha.

College of Physicians and Surgeons, New York.—Since our report of the Commencement of this College, the Secretary of the Faculty has given the following further particulars: Honorable mention was made of the authors of the subjoined theses: George Hart, M.D., Connecticut, "Transfusion of Blood;" Enrique C. Rafael, Mexico, "Physiological Action and Medicinal Uses of the Alkaline Permanganates;" William F. Mittendorf, M.D., New York, "The Examination of Urine;" Charles R. Dake, M.D., New York, "Acute Pericarditis;" Arthur M. Edwards, M.D., New Jersey, "The Application of the Microscope to Gynæcology;" Thomas R. Savage, Rhinecliff, N. Y., "Report of the cases presented at Professor Thomas' Clinique."

The following announcement was made concerning the Stevens' Triennial Prize: The prize for 1873 was given to Dr. Edgar Holden, of Newark, N. J., for a thesis on "The Sphygmograph; its Physiological and Pathological Indications." The subjects for the prize of 1876 are:

1. The History of Epidemic Diseases in the United States from 1860 to 1870; statements as to locality, dates, extent of prevalence, and mortality to be authenticated by appropriate references. The question of treatment not to form a part of the above subject.

2. The use of the Spectroscope in its application to scientific and practical medicine.

The sixty-sixth annual catalogue of this Institution shows that 360 students and physicians attended the session of 1872 and 1873. Of these, 56 had the literary degree of either A.B., A.M. or B.S. During the late session, four special series, each consisting of four lectures, were given by Professor Draper on Diabetes, Dr. Knapp on Plastic Surgery of the Eye, Dr. Peaslee on Disorders of Menstruation, and Dr. Choate on the Medical Jurisprudence of Insanity. Professor Thomas T. Sabine, M.D., is the Secretary of the Faculty.

Alumni Association of Bellevue Hospital Medical College, New York.—Since the annual meeting of this organization, held February 26th, 1873, the following gentlemen have been appointed *Councillors* by the President, Professor W. T. Lusk, M.D.—according to Article 6, of the *new* Constitution, adopted in February, 1872: Leroy M. Yale, M.D., New York; Robert Newman, M.D., New York; Alfred N. Beach, M.D. New York; William O. Sweeney, M.D., Lexington, Ky.; Peter R. Cortelyou, M.D., Brooklyn, N. Y.; John J. Mason, M.D., New York; J. Wallace MacWhinnie, M.D., New York; John W. Pinkham, M.D., Montclair, N. J.; R. M. Wyckoff, M.D., Brooklyn, N. Y.; José de la Cruz de Varona, M.D., New York; William G. Harrison, Jr., M.D., Baltimore, Md.; Charles A. Leale, M.D., New York; Edwin D. Morgan, Jr., M.D., New York; David C. Carr, M.D., New York; William F. Fluhrer, M.D., New York; Washington F. Peck, M.D., Davenport, Iowa; W. Gill Wylie, M.D., New York; William H. Katzenback, M.D., New York; George G. Needham, M.D., New York; and Thomas H. Burchard, M.D. The Councillors and the seven officers constitute the *Council*, to which is referred the business of the Association.

New York Academy of Medicine.—At the Stated Meeting of the Academy, held March 20th, 1873, Dr. Austin Flint, President, in the chair, Professor William Detmold, M.D., spoke of a new method of treating "Facial Paralysis," with illustrations. Professor John C. Dalton followed with an instructive and amusing paper on "Galen and Paracelsus." Drs. Peaslee, J. C. Peters, and others discussed the papers.

Baltimore College of Dental Surgery.—At the Thirty-third Annual Commencement of this Institution, held at Concordia Opera House, February 27th, 1873, the degree of Doctor of Dental Surgery was conferred on 27 graduates. This college was the first to confer this degree in the world, and has graduated the first of the female sex who ever received a diploma in dentistry.

Vienna Professors.—The Vienna correspondent of the Boston *Globe* writes thus concerning some of the medical men of that city: What we regard as professional courtesy seems to be entirely unknown to them, and their code of ethics is very different from ours. The most distinguished among them advertise liberally on their prescription blanks, giving their addresses, office hours, hours for treating the poor, etc. The Vienna doctors are most thoroughly wrapped up in their own ideas, and will not believe that any good thing can come out of—anywhere but Vienna.—Prof. Hyrtl, lecturer on anatomy, he thinks is the best lecturer by far of all the professors there. Next must be reckoned the famous dermatologist, Hebra. He is fat, jolly, shrewd, enthusiastic, always courteous (when he has his own way), speaking five or six languages—and is very popular with the students. Prof. Sigmund is long and slim and sombre, and is quite an uninteresting lecturer, and the American students much prefer his talented and witty assistant, Dr. Grünfeldt. Prof. Braun is very large, with an immense abdomen, sandy whiskers, a merry twinkle in his eye, and a deep mellow voice; the thorough picture of easy good-nature. Prof. Billroth is a large, fine-looking man, with sandy, full whiskers, and a keen blue eye. His researches have made him famous, but few American students attend his kliniks, as surgery is better done in America by far than in Vienna. The most noticeable thing is the amount of surgery that is done without anæsthetics.

Transactions of the Georgia Medical Association.—The twenty-third annual meeting of this Association was held in Columbus, Georgia, on the 10th, 11th, and 12th of April, 1872. The address of welcome was delivered by V. H. Taliaferro, M.D., of Columbus, followed by the annual address by Geo. M. McDowell, M.D., of Barnesville. Drs. C. B. Nottingham of Macon, Robert Battey of Rome, Carlisle Terry of Columbus, K. P. Moore of Knoxville, F. A. Stanford of Columbus, Jno. Stainback Wilson of Atlanta, W. F. Westmoreland of Atlanta, and A. W. Griggs of West Point, contributed interesting papers—which are published in the Transactions—comprising 134 pages. The roll of membership comprises 489 members, of which about 130 were in attendance. The following gentlemen were elected officers for the ensuing year: *President*, G. W. Holmes, M.D., of Rome; *First Vice-President*, Juriah Harris, M.D., of Savannah; *Second Vice-President*, A. W. Griggs, M.D., of West Point; *Corresponding Secretary*, W. C. Musgrove, M.D., of Burke County; *Permanent*

Secretary, S. H. Stout, M.D., of Atlanta; *Assistant Permanent Secretary*, J. T. Johnson, M.D., of Atlanta *Treasurer*, W. O. Daniel, M.D., of Twiggs County; *Curator*, J. T. Johnson, M.D., of Atlanta.

A Novel Way of Prescribing.—Certain British merchant vessels, which do not carry "an experienced surgeon," are supplied with medicine chests, and suitable books of direction. A sailor on board one of these once applied to his captain for relief, his complaint being that "he had something on his stomach." Under these circumstances the skipper consulted his condensed pharmacopœia, and promptly prescribed a wineglassful of No. 15, the drugs being numerically indicated after the symptomatic descriptions of disease. But there had been a run on No. 15, and the bottle was empty. Was Jack to die for lack of medical assistance? Perish the thought! The skipper was a man of ready resource. There was plenty of No. 8, plenty of No. 7. "Seven and eight make fifteen," said the captain; and Jack, to whom the calculation seemed quite natural, took the joint mixture with startling effect; for whatever *was* on his stomach came up with a rapidity that would have astonished the Royal College of Physicians.

The Oldest New York Library.—The New York Society Library, located at No. 67 University Place, containing some 60,000 volumes,—of which, there are some medical works which are not elsewhere to be found,—celebrated November 9, 1872, its one hundredth anniversary at the hall of the Historical Society, corner of Eleventh Street and Second Avenue. Dr. Thomas Ward delivered the centennial address. He said that the first public library of which we have any account was founded at Athens, by Pisistratus, about the year 544 before Christ. The second of any note was founded by Ptolemy Philadelphus, 284 years before Christ, of which 400,000 books and manuscripts were destroyed when Julius Cæsar set fire to Alexandria, in the year 47 B.C. Another library, formed of the ruins of the first until it grew to 700,000 volumes, was destroyed by the Saracens in the year 642, who heated the water of their baths for six months, by burning books instead of wood. The principal libraries of modern times are, first: that of Paris, containing 2,000,000 volumes and 100,000 manuscripts; the British museum, nearly 1,000,000 volumes, which contains more American books than any library in the United States; that of Munich, 800,000; that of the Vatican 300,000, and 40,000 manuscripts; the Boston Public Library contains 192,000; that of Congress, 180,000; the Astor Library, 142,000; the Mercantile Library, 140,000.

Nevada Soda.—A small lake in Churchill County, Nevada, covering an area of seven acres, is a perfect well of carbonate of soda in its almost pure state. Twenty thousand tons a year can be obtained from it. It is pronounced by chemists as remarkably pure, and equal in all respects to the European soda.

Pulse of Various Animals.—Vatel, in his "Veterinary Pathology," gives for our domestic animals the following pulse: Horse, from 32 to 38 pulsations per minute; ox or cow, 25 to 42; ass, 48 to 54; sheep, 70 to 79; dog, 90 to 100; cat, 110 to 120; rabbit, 120; guinea-pig, 140; duck, 135; hen, 140.

Sugar.—M. Robion de la Trehonnais, of Paris, France (*Bost. Jour. Chem.*, November, 1872), in his paper on "Beet-Root Sugar," speaking of the use made of sugar from a very remote period, says that the "Greeks and Romans gathered a kind of honey on the leaves of reeds," as mentioned by Dioscorides in the year 41. The Chinese knew how to extract sugar from the cane in times still more remote. Pliny the younger, who wrote in the year 98, states that medical men, in the times of Nero and Trajan, designated sugar by the name of Indian salt, "which," he says, "while similar to ordinary salt as to form and color, has the flavor of honey." In 1506, sugar-cane was first introduced into the West Indies.

Alcoholics in the United Kingdom.—In 1871 the United Kingdom paid $500,000,000 in gold for intoxicating liquors.

Bioplasm.—The accepted views on "Bioplasm" were well brought out by D. T. Nelson, M.D., Professor of Physiology and Histology, in his introductory address to the regular course of lectures in the Chicago Medical College, Session of 1872-73. The whole has been published in the *Chicago Medical Examiner* of October, 15, 1872.

The London Medical Schools.—The entries at the London Medical Schools since 1868 have reached the totals of 1,231 in 1869; 1,298 in 1870; 1,486 in 1871; and this year they number 1,496. The following are the figures, for this year:—

	New Entries.	All Year's Entries.
Guy's Hospital	83	319
University College	83	273
St. Bartholomew's	79	254
St. Thomas's	51	156
St. George's	47	120
King's College	35	108
London	31	91
Middlesex	22	47
St. Mary's	21	61
Charing Cross	20	48
Westminster	4	19
Total	476	1,496

Forensic Medicine.—By vote of the Faculty of the Medical Department of the University of Buffalo, the Thesis on "Forensic Medicine," by Charles B. Knowlton, is published in the October number of the *Buffalo Medical and Surgical Journal*. He reviews the duties of medical men to courts of law, to medical science, and to their professional brethren.

	TOTAL MORTALITY OF THE U. S.	MORTALITY UNDER FIVE YEARS.
Census 1850	323,272	123,211
" 1860	392,821	168,285
" 1870	492,263	203,213

It is fair to infer from these data that there are causes operating in cities unfavorable to the health and lives of children, that do not exist or manifest themselves so disastrously in the country.

Treatment of Varicose Ulcers.—A. J. Steele, M.D., of St. Louis, Mo. (*Med. Archives*, October, '72), speaks with confidence in the treatment of these ulcers, of that method first proposed by Mr. John Scott, formerly surgeon to St. George's Hospital, after an uniform success in twenty-five cases. The plan, though modified in detail, still retains the author's central idea, which was—equable support to the vessels of the entire foot and leg, and especially of all that part below the ulcer. Nothing accomplishes this end so efficiently as the properly applied adhesive plaster. Bandages alone have not the firmness; they loosen and become relaxed. It is essential that the plaster be evenly applied—no folds or creases, no uncovered angles or spaces—otherwise there will result irritation, pain, excoriation. After the strapping he applies a flannel bandage from five to seven yards in length, and about two inches in breadth. The entire foot and leg to the knee should be included.

Original Communications.

REVIEW OF THE MEDICAL TESTIMONY IN THE TRIAL OF MRS. E. G. WHARTON, FOR THE ALLEGED ATTEMPT TO POISON MR. EUGENE VAN NESS.

By HORATIO C. WOOD, Jr.,

PHILADELPHIA, PA.

The circumstances of the case, as developed at the trial recently held at Annapolis, are as follows:—

Mr. Van Ness was very much engaged through the spring and early summer of 1871, not only in attending to his duties in the banking-house in which he is clerk, but also in settling an elaborate set of private books. He very frequently, if not habitually, rose at 5 o'clock, worked until breakfast time, and immediately afterwards went to the office, where he was busily engaged until about 4 P.M. During this period he usually ate nothing more than a cracker. The interval between 4 and 7 P.M. was devoted to dinner and recreation; after it he worked at the books until 11 P.M., when he went to bed. During the spring and early summer months he suffered from frequent, severe, nervous headaches and from certain strange, occasional sensations in the throat, occurring chiefly when he was excited. These he attributed, on the stand, to a tight shirt-collar, but according to the witnesses called for the defence, at the time of their occurrence he had described them as a feeling of "choking or swelling in his throat." His stomach is so weak that brandy habitually nauseates him, and malt liquors disagree with him very decidedly. During the time in which the occurrences here narrated took place the weather was extremely hot. On the 19th of June, Mr. Van Ness drank claret at Mrs. Wharton's, on an empty stomach. The taste of the claret was natural, but its drinking was followed in a very short time by lightness of the head, giddiness, numbness and stiffness in the back, and general wretchedness, which symptoms, however, passed off spontaneously, without nausea or vomiting. On the 20th of June, when returning from his office, he again stopped at Mrs. Wharton's, and ate, on an empty stomach, raspberries and cream, and drank claret. This time, as he testified, he noticed that the wine had the "taste of peach-leaves."* Shortly afterwards, he was seized with giddiness, numbness and stiffness of the neck, great wretchedness, and finally intense muscular weakness and relaxation. Notwithstanding these symptoms, he walked some squares to the house of his brother-in-law, where some brandy was administered. Immediately after taking this, he vomited "*spasmodically, without nausea*," and was at once so much relieved that in two hours' time he rode to and walked in the park, engaging in free conversation with ladies whom he met there.

On Saturday, the 24th of June, he attempted to rise early, but was forced to return to bed by a very severe headache. About 9 A.M. he had sufficiently recovered to get up, and told his wife that he was unable to eat then, but would stop at Mrs. Wharton's and get some of "her nice black tea and a piece of toast." This he did, and afterwards worked until 4 P.M. At this time he returned to Mrs. Wharton's, having eaten nothing but a slice of toast with the tea since the day before. At Mrs. Wharton's he drank some lager-bier, with what was stated to be compound tincture of gentian in it.*

Shortly after this, on attempting to read, he found that he was partially blind, and the next moment was seized with the same sensations in the head as on the two previous occasions—namely, giddiness and lightness—and on rising from his chair he was unable to stand.

In a minute or two stiffness was felt in the neck, to use his words, "creeping upwards and downwards" until it involved the back and finally the extremities, and he became rigid all over. He now slid off the chair to the floor, and his *jaw became and remained firmly set. After this* he had tetanic spasms which recurred at intervals until 7 P.M. Between the spasms he remained rigid, with marked opisthotonos. The consciousness was lost during the second and all subsequent paroxysms.

The convulsions commenced with a crushing feeling between the shoulders, and the unconsciousness came on either before or simultaneously with the convulsions. During the latter the eyes were closed, the feet crossed, and the toes inverted.

Fanning was not only endured, but was very grateful to the patient. There was marked dimness of vision throughout the attack, also a constant complaint of distress in the stomach and reference of the trouble to that viscus. "Crying spells" alternated with the convulsions. These "crying spells" were variously described by the witnesses—who used such expressions as "he cried like a child," "violent sobbing"—and one lady testified that she never saw a *man* cry so, and that it was these spells which distressed her—not the convulsions. After 7 P.M., although Mr. Van Ness remained "stiff as a board," and had persistent opisthotonos, no convulsion occurred, and about 10 P.M. the rigidity passed off. The treatment used during the convulsions chiefly consisted of the exhibition of 10 and 20-grain doses of chloral, and the inhalation of chloroform. Early in the attack he was vomited with mustard. After a night's sleep, he awoke feeling pretty comfortable until a cup of tea with toast was given him, when nausea and vomiting came on and persisted through the day. Creasote, lime-water and milk, and large doses of prussic acid were administered, and towards night he became quiet. On Tuesday morning he awoke with a desire for food, and two-thirds of a cupful of beef-tea or beef-essence was given him. This agreed with him; but a repetition of the same quantity within an hour caused nausea and a "sensation resembling heart-burn."

In the evening he was wakened and some beef-tea offered him. He refused it on the ground that it had previously made him sick, and as it was disgusting to him, would vomit him. Nevertheless he took it, and, after a time, it did bring on violent vomiting, with burning in the stomach and an acrid or metallic taste and great prostration following the emesis. The metallic taste he stated distinctly was not perceptible in the beef-tea, but *only* in the matters vomited.

Tuesday morning he was better, no more beef-tea was given, and he was not sick, but the muscular rigidity which had disappeared on Sunday *returned in a less degree, and* "*rheumatic pains and stiffness*" *persisted for two weeks.*

* It is proper to state that Miss Nellie Wharton was present at this interview, and on Mr. Van Ness's complaining of the taste of the claret, she drank of it, and said to him that she could not perceive anything wrong about it. It produced in her no symptoms whatever.

* This was put in partly at his own solicitation, and, after Mrs. Wharton's arrest, the bottle was found in the sideboard with the gentian in it.

Upon the above-narrated circumstances the prosecution rested almost entirely its case, at least as far as the medical testimony was concerned. There was no chemical evidence whatever, save only that relating to the tumbler which achieved notoriety in the Ketchum trial. Out of this Mr. Van Ness did not drink, and, further, the prosecution failed to connect it with Mrs. Wharton, beyond the mere fact of its being found in her house in a position where, in the language of one of the witnesses for the prosecution, "hundreds of people" had free access to it. The chemistry of this tumbler has been sufficiently discussed in the *American Journal of Medical Sciences*, and I do not propose to enlarge upon it. It ought to be distinctly known, however, that the open tumbler was carried about in the pocket of a woman inimical to the accused—from house to house, and certainly into one drug-store—that the examining chemist kept no laboratory notes—that he furnished an official statement to the prosecuting attorney, four months after date, "essentially different" from his sworn statement—that everything was trusted to his memory, which is so bad that, although he has been teaching medical chemistry thirty-five years, on the stand he acknowledged that he could not remember the shape of the crystals of tartar-emetic—the very poison in question!

Indeed, the scientific value of Dr. Aiken's testimony may be gauged by the statement which he made, that he dropped some of a solution of the sediment in the tumbler upon a piece of glass, and put the matter left by its evaporation under a microscope magnifying 40,000 diameters, but that the instrument was not powerful enough to enable him to distinguish the shape of the crystals!! Dr. Aiken may have meant 40,000 surfaces, but *he said*, in the quiet of direct testimony, 40,000 diameters.

Drs. Williams and Chew, for the prosecution, took the ground that they could give no positive opinion as to the attacks of the 19th and 20th of June—that the only possible cause of the attack of Saturday, the 24th, was strychnia; and that the attacks of Sunday, Monday, and Monday night were due to tartar-emetic. Dr. Williams was especially positive that he could recognize with certainty tartar-emetic poison, *by the symptoms alone*, and that no other cause could have induced the attacks seen in Mr. Van Ness's case. During their cross-examination both he and Dr. Chew stated that they recognized the case as poisoning at the time of its occurrence; although no precautions were taken or warning given, that the patient having received one dose of the poison, the second should not be administered, and that, the second dose having been given, no opportunity should be afforded for the exhibition of the third. The universally-recognized antidote for tartar-emetic was not given, nor were the matters vomited nor the urine saved for chemical examination. The treatment consisted solely of the administration of creasote, lime-water and milk, large doses of prussic acid, and brandy, the usual remedies for nervous vomiting. Dr. Chew went so far as to testify that the proper treatment of tartar-emetic poisoning was the free exhibition of prussic acid! No comment on this is necessary. Every medical man knows or ought to know that there is a universally-recognized antidote to tartar-emetic, and can judge of the propriety of withholding this antidote, and of giving to a person dying of exhaustion—as men do die in tartar-emetic poisoning—large amounts of the most powerful known depressant!

The reasons these gentlemen gave for their opinion did not possess much closeness of detail, and have passed to a great extent from my memory. Dr. Chew, however, gave as one of the mainstays of his opinion, the "*loss of consciousness during the convulsions!*" and both the gentlemen insisted that strychnia has a very pronounced action on the brain.

As the first expert called by the defence, and the only one who could testify from having heard the previous testimony, and not merely from a hypothetical case, I gave a positive opinion that symptoms *alone* rarely, and in regard to the irritant metallic poisons never, justify the diagnosis of poisoning being made with any degree of certainty; that the attack of the 24th of June could not have been caused by strychnia or other poison, known to myself; that, whilst the symptoms induced by tartar-emetic do not essentially differ from those caused by certain natural diseases or conditions, in so far as there was no purging on the Sunday and Monday of Mr. Van Ness's illness, although the nausea and vomiting lasted many hours, the symptoms were inconsistent with tartar-emetic poisoning, and that natural cause for the vomiting was very apparent. As a conclusion from the above opinion given in detail, I further offered that there was no poison or combination of poisons capable of having induced the sickness of Mr. Van Ness as a whole; that, although the symptoms of the attacks of Sunday and Monday were not absolutely incompatible with the idea of tartar-emetic poisoning yet not only was there no proof that they were due to that drug, but that it was also improbable, because there was no purging, and because obvious natural cause existed for the vomiting. Dr. Claude, of Annapolis, when called to the stand, after I had left Annapolis, strengthened this opinion by what I think was a well-taken point, namely, that the vomiting induced by a single poisonous dose of tartar-emetic would not last eight or ten hours, as did the sickness of Mr. Van Ness on Sunday, especially if the poison were not severe enough in its action to induce purging or violent gastritis.

It is not necessary to bring forward any proof here of the proposition that the symptoms caused by tartar-emetic are not sufficiently characteristic, even in fatal cases, to distinguish the poisoning from the natural disease. All authorities agree as to this, and the point becomes still stronger when the symptoms do not pass beyond nausea and vomiting.

The reasons on which I based my assertion that the convulsive attack could not be due to strychnia are given below in a tabular form, with references to such authorities as I could consult at Annapolis before giving my opinion:—

Mr. Van Ness's Case.	Strychnia Poisoning.
Commenced with blindness and weakness.	Begins with exhilaration and restlessness, the special senses being usually much sharpened.* Dimness of vision may in some cases be manifested later, after the development of other symptoms, but even then is rare.
Muscular symptoms commenced with rigidity of the neck, which gradually "crept over the body," affecting the extremities last.	Muscular symptoms commence in the extremities, or the convulsion, when the dose is large, seizes the whole body simultaneously.†
Jaw rigidly set before a convulsion, and remained so between the paroxysms.	Jaw the last part of the body to be affected; its muscles relax first, and even when during a severe convulsion it is set, it drops as soon as the latter ceases.‡
Persistent opisthotonos, and intense rigidity between the convulsions, and after the convulsions had ceased.	Muscular relaxation (rarely a slight rigidity) between the convulsions, the patient being exhausted

* Taylor on Poisons, p. 682. Wormley, Microchemistry of Poisons, p. 536.

† Wormley, p. 556. Stillé, Therapeutics, vol. ii., p. 148.

‡ Taylor on Poisons, p. 134 and p. 682. Medical Jurisprudence, pp. 540, 541, 536. Tardieu, p. 934.

ceased, the opisthotonos and intense rigidity lasted for hours.	and sweating. If recovery occur the convulsions gradually cease, leaving merely muscular soreness, and sometimes stiffness like that felt after violent exercise.*
Consciousness lost as the second convulsion came on, and lost with every other convulsion, the disturbance of consciousness and motility being simultaneous.	Consciousness always preserved during convulsions, except when the latter become so intense that death is imminent from suffocation, in which case *sometimes* the patient becomes insensible from asphyxia,† which comes on during the later part of a convulsion, and is almost a certain precursor of death.
Desired to be fanned.	The slightest "breath of air" produces a convulsion.‡
Crying spells, in which he "sobbed violently," and "cried like a child," alternated with the convulsions.	Patient may scream with pain, or may express great apprehensions, but such "crying spells" would appear to be impossible.
Eyes closed.	Eyes stretched wide open.§
The spasms in leg must have been partial, as the feet were crossed and toes inverted, which could not happen if all the muscles were involved, because the muscles of eversion being very much the stronger would of necessity overcome the antagonistic muscles, and the feet be everted.	Legs stiffly extended, with feet everted, ‖ as the spasms affect all the muscles of the leg.
After the cessation of the convulsions, and the complete relaxation of the muscles through Sunday and Monday, the rigidity returned on Tuesday or Wednesday and lasted two weeks, as "rheumatic pains and stiffness," without any allegation or apparent possibility of a second dose of strychnia.	No return of the symptoms is possible, without the exhibition of a second dose.

Many of the above characteristic symptoms of strychnia poisoning are not only sustained by authority, but are plainly inherent to the very nature of the matter. Thus, as strychnia does not act on the brain, consciousness cannot possibly be lost save only when the disturbance is sufficient to induce asphyxia, bordering upon fatal arrest of respiration. Again, strychnia does not originate motor disturbance, but only puts the spinal cord in such a condition that the slightest external irritation brings on a convulsion. The well-known experiment of Claude Bernard proves this; he found if the afferent nerve-roots were cut no convulsions followed the injection of strychnia.

Judging, therefore, from the known physiological action of strychnia, it would seem that it cannot cause persistent rigidity and opisthotonos. Hysteria, as is well known, frequently does so, and Taylor in his work on poisons states that hysteria is to be distinguished from strychnia poisoning by the occurrence of persistent rigidity and unconsciousness.

The staring, open eye of strychnia poisoning is an apparently trivial symptom, but in reality it is a local expression of a primary principle or fact, namely, that in strychnia poisoning the fully-formed convulsions are universal, affecting all the voluntary muscles; this principle, the eversion of the feet, is another local expression of this general law. On the other hand, the hysteroidal convulsion is very generally partial, and affects groups of muscles.

It is very evident that the convulsions in the case of Mr. Van Ness were of the latter character. The prosecution attempted to make capital out of the fact that reflex convulsions were excited by touching, in the case of Mr. Van Ness. Now, over-susceptibility of the reflex centres is not at all peculiar to strychnia poisoning; if there be anything peculiar connected with the state of the spinal centres, in the latter condition, it is the *degree* of this over-susceptibility—it is the existence of an over-susceptibility so intense that the slightest breath of air is unendurable, and provokes convulsions. This intensity of morbid activity did not exist in the case of Mr. Van Ness. It was repeatedly testified that he wanted to be fanned all through the attack.

As none of the characteristic symptoms of strychnia poisoning were present in the case of Mr. Van Ness—as almost, if not absolutely, every diagnostic symptom of the hysteroidal convulsion was brought out piece by piece in the evidence—I could not, and still cannot, arrive but at the conclusion that the attack of the 24th June was not strychnia poisoning, but a hysteroidal convulsion, perhaps the result of gastro-intestinal irritation produced by lager-bier, but very possibly an outbreak merely coincidently, and not causally related to the drinking of the malt liquor.

It is a fact insisted on by Sir Ranald Martin, and one which I can confirm by my own experience, that exposure to heat does occasionally induce hysterical outbreaks in men, and the intense heat of that 24th of June may have had something to do with the attack of Mr. Van Ness.

During the latter part of Saturday afternoon, Mr. Van Ness was kept for hours more or less completely under the influence of chloroform, and a number (how many was not stated) of ten and afterwards twenty-grain doses of chloral were given during the same afternoon and evening. When he awoke the next morning and took some food, he had nausea, heart-burn and vomiting, which continued during the day. I suppose there is scarcely a physician who has not seen similar symptoms induced by so feeble a narcotic as a single grain of opium, and yet Drs. Williams and Chew positively testified that nothing but tartar-emetic in the food could account for the symptoms!

Again on Tuesday morning two-thirds of a cupful of beef-tea (essence?) having been relished, the same dose repeated within the hour nauseated him and produced heart-burn. Surely there is nothing strange in this; its parallel is an every-day occurrence.

The same evening Mr. Van Ness was waked up and beef-tea was offered him; he objected strenuously to it on the ground that it had disagreed with and sickened him before; notwithstanding this he finally took it, fell asleep, and in a short time waked up, "with oppression on the chest, intense burning and great nausea;" he vomited freely and was very weak and faint after it. Nothing wrong was perceived in the taste until after the vomiting. The medical experts for the prosecution contended that these symptoms could be due only to tartar-emetic—those for the defence that they were perfectly explainable upon the idea that the whole attack of sickness from the first to the last had as a large element gastric derangement, and that these symptoms were simply due to the beef-tea disagreeing with the stomach. Although Dr. Williams stated that there was frequent purging, according to Mr. Van Ness's testimony there was very little if any action on the bowels, and as at no time was opium or other remedy given to check diarrhœa, it is very evident that none of moment occurred.

The whole case, as viewed by the defence, can be summed up in a few words. A gentleman of nervous temperament, as a result of overwork and intense heat, suffers from symptoms of gastric irritation following the taking of claret and lemonade; the next day a similar but more severe attack occurs as the result of drinking

* Taylor on Poisons, pp. 134, 136, 682. Wormley, pp. 536, 540, 541. Tardieu, Clinique sur l'Empoisonnement, pp. 924, 938, 939. Husemann, Handbuch der Toxicologie, p. 168.

† Wormley, p. 536. Taylor, Medical Jurisprudence, pp. 331, 332. Wharton and Stillé, Medical Jurisprudence, paragraph 757. Tardieu, p. 923. Stillé, Therapeutics, p. 148.

‡ Stillé, Therapeutics, p. 148.

§ Stillé, Therapeutics, p. 148. Wormley, p. 536. Tardieu, p. 924.

‖ Tardieu, p. 924; also other authorities, which I neglected to note, and at present writing have not at hand.

claret upon raspberries and cream taken when the stomach was empty; after this there is a third attack commencing with precisely similar symptoms, but ending in a hysteroidal convulsion, during which chloral and chloroform are freely administered; the next day intense nausea and vomiting, partly resulting from the drugs used, partly due to gastric disorder; the day after that nausea from overcrowding the stomach with beef-tea, and finally severe vomiting from a further dose of the same actively disagreeing with the stomach.

The assignment of any importance to the assertions of a man, whose stomach was so entirely out of order, as to the taste of the matters vomited, seems to me simply ridiculous.

During the attack of Saturday Mr. Van Ness stated frequently that the attack was of the same nature as those of the 19th and 20th of June, and on the witness stand he asserted that the first symptoms of the three attacks were almost identical. The attacks of the 19th and 20th ended in great weakness and muscular relaxation, that of the 24th in a convulsion. The unity and the diversity of these attacks cannot be accounted for on the supposition of poisoning. On the other hand, it is well known that stomachic irritation will at one time induce profound weakness—at another time convulsions—or it may produce these two states consecutively one after the other, precisely as occurred in the attack of Saturday.

At the trial several side issues were brought into the case—alleged attempts by Mrs. Wharton to poison others in the house. Both of the supposed victims were ladies, and it does not seem necessary here to discuss the matter at length, as the medical experts for the prosecution did not express any opinion about the attacks; the evidence being simply brought in to affect the jury, although no one dared to say that the cases were really poisoning.

I stated my belief that these attacks were merely sympathetic, the result of the emotions and imagination acting on the body. It was very plain they were not due to any known poison, at least in one of the cases, as great prostration, nausea, "things looking dark," etc., followed "the merest sip possible of milk *as bitter as gall*." No bitter poison is known which produces any such symptoms, unless it be given in very large amounts. The other attack came on after warming beef-tea over the fire, and the offending material was also only merely tasted and was *bitter*. When it is further remembered that these witnesses were exceedingly inimical to the accused, I do not think any weight ought to be attached to the matter.

Before closing the present article the writer thinks it but justice to the lady who has suffered so deeply from the accusations which have been made against her, to call attention to the peculiar circumstances surrounding the expert testimony on the part of the prosecution—circumstances which in justice, if not in law, ought to have excluded it from the court-room. As every one knows, Mrs. Wharton, before the present trial, had successfully resisted the charge of poisoning. It is a matter of history that the public sentiment against Mrs. Wharton, which demanded her trial, had its origin, as had the judicial proceedings, in the blundering of Dr. Aiken and his colleagues. The positive official assertion of the former that he had found twenty grains of tartar-emetic in the stomach of General Ketchum, backed by the whole moral and professional force of the University of Maryland, was months before the people uncontradicted; no wonder that public opinion became so set that no subsequent evidence could shake it, especially when supported as it became by local pride and local prejudice.

At the first trial the whole faculty of the University, from the porter at the gate to the most learned Professor, appeared in support of their colleague, Dr. Aiken, until they were all compromised equally with him, and their reputations equally involved with his. What was the real scientific value of their testimony; what amount of justification there was for their extraordinary conduct; what truth in their assertions that General Ketchum was certainly poisoned, the following extract from the new edition of Taylor's *Medical Jurisprudence* portrays. No man can question the authority of Dr. Taylor on such a point; no man can allege that his mind could have been biassed in London in favor of any one tried at Annapolis. The elements for a true, calm judicial judgment were all present, and this is what he says:—"Mrs. E. G. Wharton was charged with the poisoning of her friend General Ketchum. The trial lasted fifty-two days, and an astonishing amount of evidence was brought forward by the prosecution and defence, apparently owing to the high social position of the parties, for there is nothing, medically speaking, in the case itself, which could not have been settled in forty-eight hours. The General died after a short illness, but the *symptoms*, taken as a whole, *bore no resemblance* to those observed in poisoning with antimony, and but *for the alleged discovery* after death of tartar-emetic, no *suspicion of poison* would probably have arisen. . . . . The chemical evidence does not therefore conflict with the pathological, for it failed to show with clearness and distinctness the presence and proportion of poison said to have been found. *The evidence that antimony was really there was not satisfactory*, and that 20 grains were in the stomach was wholly unproven."

The medical experts who appeared against Mrs. Wharton in the Van Ness case had been in the fore front of the previous trial, and had apparently their reputations and consequently their interests involved in the result of the second trial; for if, as they had asserted, Mrs. Wharton was guilty of the murder of General Ketchum, she escaped conviction through their ignorance and carelessness. In the case of Mr. Van Ness, it was the same story. Under such circumstances how could they claim that impartiality upon which, as Chief Justice Shaw has well said, rests all the value of expert testimony?

In conclusion, because my testimony and actions have been grossly misrepresented by certain of the Baltimore newspapers, and because even my motives and personal integrity have been called in question, a few strictly personal remarks seem to be allowable. I desire simply to state that until after the recent trial I had never read any medical or other account of the first trial, and that my agreement with Mr. Thomas, the senior counsel for Mrs. Wharton, was, that my duties should be to aid in bringing out the facts of the case, and to give privately to Mr. Thomas a professional opinion thereon—for this and this only was a fee to be received. It was to be left to Mr. Thomas whether this opinion should also be promulgated from the witness stand, but for going on the stand no fee whatever was to be given or taken. I had therefore no possible interest to serve in this matter, and whatever the profession may judge of my opinion, I do insist that, as far as possible, it was formed without bias.

After my mind was settled and my opinion officially delivered, not to have felt and shown disapproval of what seemed to me the most extraordinary, ignorant, or biassed, and untrue expert testimony given by the medical gentlemen engaged in the prosecution of Mrs. Wharton, not to have felt and expressed any sympathy

with the victim, would, I confess, have lowered me in my own estimation.

THE ELECTRO-THERAPEUTICS OF DISPLACEMENTS OF THE UTERUS.

By EDWARD C. MANN, M.D.,

BROOKLYN.

It has long been and is, at the present day, one of the most difficult problems relating to gynæcology, how to establish a complete cure for displacements of the uterus; and it remains to be seen, whether, in many cases, electricity may not be one of the most efficient means in the hands of the profession for accomplishing the desired end. We take the liberty of referring to the normal anatomy of the supports of the uterus, which demand our especial attention, as being the parts upon which we wish to bring electricity to bear, when that organ is in a state of displacement. The uterus is suspended in the pelvis and prevented from descent by three agencies, viz.: The vaginal walls whose structure is blended with that of the uterus, the longitudinal muscular fibres of the vaginal walls being continuous with the superficial muscular fibres of the uterus. Secondly, by areolar tissue, which surrounds and binds it to the bladder, rectum and pelvic walls; and thirdly, by the ligaments; the utero-sacral and utero-vesical ligaments, which attach the cervix respectively to the sacrum and bladder, completing the means of support against prolapsus in the first and second degree, the broad ligaments not being brought into action until the prolapsus has become complete. Retroversion is prevented by the round ligaments which are continuous with the tissue of the uterus, with which their structure is identical, and which pass from the fundus to the pubes.

The transversalis muscle also sends muscular fibres to these ligaments, which fact is interesting as connected with the application of electricity to the abdominal region. Anteversion is prevented by the bladder, the broad ligaments, and the columns of the vagina. It is evident that in displacements of the uterus, the uterine ligaments must be on a constant stretch, and that although naturally elastic, yet such a prolonged strain must cause them to lose in time their elasticity, and that all means employed for a permanent cure will be worthless, unless we can in some way impart the wanting tonicity to the partially paralyzed muscular fibres, both of the ligaments and vaginal column. In many cases the vaginal walls and sphincter vaginæ have lost all their tonicity, and are in a state of atony and semi-paralyzation, and the uterus descends for the want of its chief support. We find in the state existing after parturition a fruitful cause for prolapsus, and a wide field for electro-therapeutics. The uterus is much heavier than usual, and the vagina and sphincter vaginæ very much relaxed and feeble, and the ligaments are also stretched very much. In cases of prolapsus from the above mentioned predisposing causes, we may hope for complete cure from the use of local and general electrization; and the beneficial action which we can exert upon the uterus and its ligaments, and upon the vagina, cannot be surpassed by any other remedial agent.

We find in these cases a want of muscular contractility in all of the uterine supports.

Now, if we can, by faradization or galvanization, or both combined, produce contractions of the muscular fibres of the ligaments, we shall thus restore their elasticity, and mechanically draw the uterus back to its normal axis; and if we restore the tonicity of the vaginal walls and cause contraction of the longitudinal muscular fibres of the vagina, and these applications are continued for a sufficient length of time, the uterus must be, of necessity, gradually restored to its proper position in the pelvis. The use of pessaries affords but a temporary relief; and it remains for electro-therapeutics to establish a permanent cure for this condition which afflicts so large a number of the female population. We have treated successfully four cases in all of which there was a slight prolapsus owing to the above mentioned causes, and under local faradization (the negative electrode being introduced into the vagina and the positive being applied externally over the uterus and its appendages, also both poles being applied externally), the vaginal walls and sphincter vaginæ recovered their normal tonicity and elasticity, the ligaments were also strengthened, and the uterus was restored to its normal axis, owing to the mechanical effect thus produced by the induced current. In all these cases the prolapsus was slight, but there is every reason for believing that equally good results may be obtained in cases of this kind even if they are far worse than the above mentioned ones. In inversion which is often dependent upon the relaxation and inertia subsequent to delivery, the application of electricity by the intra-uterine electrode may prove a valuable adjuvant after reduction, the effect being to overcome the relaxation and inertia of the uterine walls. In anteversion depending upon laxity of the abdominal walls, that takes away the support of the viscera, and which is often produced by the pernicious habit of wearing very tight clothing, which forces down the viscera upon the fundus, we find the utero-vesical ligaments in a lax state, and if we wish to accomplish a complete cure, we must restore their normal elasticity, and for this there are no means equal to electricity. It is needless to add that the undue pressure exerted by the clothing must be stopped as well after as during treatment, if we expect an ultimate cure.

In anteflexion due to an undeveloped state of the uterine parenchyma, which is a condition frequently met with, the application of electricity would stimulate the growth of the uterine tissue, and impart tonicity to the utero-vesical ligaments, and thus perhaps aid in restoring the uterus to its normal position. In retroversion due to sub-involution and relaxed support, or occurring as a sequence to parturition, we may hope in many cases for the best results from the mechanical effects of the induced current upon the uterus and utero-sacral ligaments. The application of electricity in these cases is intended mainly to aid in keeping the uterus in position after it has been replaced by imparting strength to the uterine walls, which have been weakened very often, as the result of inflammation, pregnancy, or parturition. In retroflexion, which is generally the result of some influence which weakens the uterine walls, the round ligaments are relaxed, and the abdominal walls are generally lax. Subinvolution may also act as a cause of retroflexion. In these cases we find the uterus flabby and large, owing to the retardation of the process of absorption by inflammation, congestion, or atony. The local application of the induced current in such cases will act on the contractile fibre of the uterus, overcoming the atony which exists, and causing contraction, and will also aid in overcoming the ergorgement which often exists. The use of the galvanic current will aid materially in promoting the process of absorption and should be used in connection with the induced current. The applications should be made by introducing into the uterus the negative pole

by means of the intra-uterine electrode, while the positive pole may be applied to the hypogastric or lumbar region, or introduced into the bladder or rectum by means of an insulated vesical or rectal electrode. In this way a very strong current can be borne, with but little discomfort to the patient. The application of the induced current to the abdomen will also be of great service in many cases, by overcoming the laxity of the abdominal walls. Superinvolution or atrophy of the uterus due to interference with the process of involution by inflammation may be often successfully treated by electricity. In such cases the cavity of the uterus is much diminished, and the process of menstruation interfered with or entirely absent. The application of electricity in these cases by means of the intra-uterine electrode will stimulate the growth of the organ, and at the period at which the menses have been accustomed to appear a strong current may be passed through the uterus and ovaries, which will in most cases probably result in the re-establishment of the menstrual function.

The use of general faradization will in a majority of cases probably relieve the nervousness, hysteria, and neuralgia, which so often accompany atrophy of the uterus. One very marked case of this kind occurred in a lady of 25 years of age, Mrs. B. Digital examination revealed the uterus high up in the pelvis very small and very light. The cavity of the uterus measured but 2¼ inches. There was no menstrual discharge; the result being that the patient was excessively nervous and irritable, and was very hysterical.

Applications were made locally to the uterus, the negative pole being introduced into the uterus by means of the intra-uterine electrode, while the positive pole was applied to the hypogastric region. After eight applications the cavity of the uterus as measured by the probe had increased from 2¼ to 2½ inches, and digital examination proved conclusively an increase in size and weight. General faradization resulted in a great improvement in the general health, and was the means of relieving the nervousness and hysteria which had been so troublesome. The amenorrhœa was entirely cured, and when the last examination was made, the cavity of the uterus measured 2⅝ inches, as nearly as could be determined, and the patient reported that her courses had been normal on the preceding menstrual epoch. At the commencement of treatment, when the time for the menses to appear had nearly arrived, a strong current was passed through the uterus and ovaries, with the purpose of exciting them, and with satisfactory results, and this was continued throughout the treatment on each month with the same good results.

As the galvanic current has a greater chemical, catalytic, and electrotonic action than the faradic, and also causes greater molecular changes in the tissues, the effects of it would therefore be more powerful and lasting; and, on the other hand, as the superior mechanical effects of the faradic current are to be desired also, a combination of the two currents, or galvano-faradization, would doubtless be more efficacious in many cases than either alone, in the treatment of displacements. For this purpose it would be necessary to employ two double electrodes. General faradization and central galvanization in many cases cannot fail to be of service in improving nutrition, and relieving many of the nervous symptoms which are coexistent with displacements of the uterus.

In closing, we desire to present a case of prolapsus of long standing, which was successfully treated by faradization. Mrs. H., married. Has had two children, the youngest three years old. Has suffered for seven years from prolapsus, which came on after the birth of the first child. This was partially relieved by treatment by her attending physician, and four years after she again became pregnant, and had a tedious and painful labor, and was finally delivered by the aid of forceps. Shortly after, there was complete procidentia, which was restored by the attending physician. Was first seen by the writer about a year ago, and gave the above history. She was then suffering from prolapsus in the second degree, complicated by amenorrhœa, obstinate constipation, dyspepsia, vomiting, and severe coccyodynia. She complained of great tenderness and pain in the region of the coccyx, and could not bear pressure over it. The pain was of a sharp neuralgic nature, and was increased by rising from a sitting posture and in defecation. This condition was the result of the last parturition. Treatment for the prolapsus was commenced by faradization, the applications being directed to the vagina and uterus, and to the hypogastric and lumbar regions. Vaginal examinations from time to time showed that the uterus was being slowly but surely restored to its normal axis. The laxity of the abdominal walls, which had been very marked, decreased; the menses appeared; and under general faradization and ferruginous tonics, came restored appetite and a cessation of the dyspepsia, vomiting, and nervous irritability which had made the patient's life a burden to her. The constipation was also relieved by the applications to the abdomen. The treatment was continued every other day for six months, at the end of which time the uterus was perfectly restored to its proper position in the pelvis. The coccyodynia was treated locally, the negative electrode being applied to the painful spot, and the positive pole being applied on either side of the coccyx, a strong current being employed. These applications gave almost immediate relief, and this relief was rendered permanent by their application being made as long as the patient remained under treatment. This is the only case of coccyodynia that we have treated, but the marked relief that was afforded would seem to indicate the propriety of the use of electricity in such cases, inasmuch as the only medical cure heretofore has been found either in section of the muscles, or extirpation of the coccyx.

Another case of but a few months' standing of prolapsus in the first degree, due to parturition, was relieved after a few applications of local and general faradization, and the general health of the patient much improved.

CASE OF ACUTE RHEUMATISM, WITH PERICARDITIS,

SUCCESSFULLY TREATED WITH THE COLD BATH.

By H. W. BOONE, M.D.,

A. A. SURG. U. S. A., FT. HALL, IDAHO.

From time to time various medical journals have contained reports of the good effects of the application of cold in rheumatic hyperpyrexia. In the July number of the *Practitioner*, Dr. Charles Kelly, Asst. Physician to King's Coll. Hospital, reports two cases of considerable interest. In his own words: "Both suffered from their first attack of rheumatic fever; both had similar symptoms, and in both the pericardium was inflamed. The man seemed to be going on very well for a time, but then his temperature went up and he died; the woman, who was equally ill, and in whom the temperature was still higher, was cooled

down more than six and a-half degrees in four and a half hours, and made an excellent recovery." In the case of the woman, the simple addition to the treatment of cold applications seems to have turned the scale and saved her life. Prof. C. Leibermeister, of Tübingen, in his lectures on the treatment of fevers, speaking of the use of the cold bath, says: "But this method is not only useful in abdominal typhus, but in every febrile ailment in which the temperature by its height and duration brings danger. The number of diseases is much larger than was formerly supposed. In those diseases in which exist severe and dangerous local alterations, is gained a great deal when we succeed to conquer the danger solely dependent upon the fever." In the January number of *Braithwaite* for 1873, Dr. Henry Thompson, physician to the Middlesex Hospital, reports the successful treatment with baths of a case of acute rheumatism with head symptoms. He mentions, incidentally, that the patient had severe and extensive complications—including pneumonia, pleurisy, bronchitis, and pericarditis—which underwent no perceptible change for the worse in consequence of the treatment adopted. Dr. Thompson considers that in these cases a high temperature is the index of some profound and damaging impression upon the nervous system. With regard to the value of cold applications in the treatment of this disease, he says: "There be many factors at work all conspiring together to compass the death of the patient. If the aggregate of these factors be overwhelmingly strong, there is an end of the matter and the patient dies; but let the powers of life and death be more evenly adjusted, then the removal of any single factor (say the temperature) turns the scale in favor of life, or, to use a more homely metaphor, takes off the last ounce that is breaking the camel's back. It behooves us, therefore, practically to accept the dogma that it is the heat which is the main destructive element, and to act upon it at the bedside whether we believe it or not. We can control temperature, and we are bound to control it." He considers a temperature of 105 or over to call for a prompt use of the bath, and uses it even at a lower temperature to palliate delirium and restlessness. The perusal of these reports leads me to contribute some notes of a case which came under my treatment last summer.

M., 41, native U. S., teamster in government employ. Admitted to hospital August 24, 1872. Had a slight attack of rheumatism five years ago. Is a hearty, well-nourished man; drinks some. August 21, was taken with severe pain in right knee and ankle, and had some fever. Has continued to get worse, and applied for treatment this morning. His right ankle and knee and both wrists are swollen, red, and painful. Tongue moist, furred. Skin perspiring freely. Bowels constipated. Pulse 98, full; temperature at 7 A. M., 101°. Heart sounds normal. No pain in chest. ℞ Sodæ and pot. tart. ʒ i.; Antim. and pot. tart. grs. ij. Mix in water and take at one dose. The affected joints to be wrapped in flannel and oiled silk, and kept wet with Fuller's sol. of bicarb. potass. and opium. Diet, beef-tea and milk. Bowels were freely moved. August 27.—Pain has left the ankle during the night; is worst now in the shoulders. Suffered severely last night, but was relieved by 10 grs. Dover's powd., and obtained some sleep. Urine high colored; no albumen. Takes food well. Temperature in evening, 103¾°; resp., 30. Sept. 1.—Passed a restless night. Has pain in testicles; they are tender and swollen. Says he has a dull pain over region of heart. Resp., 42; temperature, 103°. At 7 A.M., area of heart's dulness slightly enlarged. On auscultation a to and fro sound is heard. Two wet cups applied over region of heart, which gave some relief. Sudamina, chiefly over chest. He is very feeble and depressed. Quinia, grs. 5 every four hours, 10 grs. Dover's powd. at night. Six oz. brandy a day. Sept. 5th.—Patient continues much prostrated; delirious for 24 hours. The area of the heart's dulness extends above to second intercostal space, and laterally from near the right edge of sternum to beyond left nipple. No friction sound. The temperature is 105¾° at 7 A.M.; resp., 44. At 9 A.M. he was placed in a bath at the temperature of 54°, and kept in it 40 minutes, when the temperature was lowered to 101°. While in the bath he complained of cold. In the afternoon the temperature began to rise, and the bath was again used for 24 minutes, when the temperature fell to 100°. The patient then went to sleep. Sept. 6.—The patient feels easier. Temperature, 100°; resp., 37. Sept. 9.—Is stronger, and takes more nourishment. Sept. 14.—Area of heart's dulness diminishing; continues to improve. Sept. 20.—He is convalescing.

Reports of Hospitals.

BELLEVUE HOSPITAL.

Notes of Practice and Peculiarities of Treatment.

BURNS.

The remedies used in the treatment of this class of accidents are as numerous as the visiting surgeons and house surgeons are disposed to devise.

Common white paint kept continually spread on the surface is a remedy quite commonly used.

Equal parts of Garland's cerate and sweet oil is a remedy favorably known.

A very satisfactory remedy is Dr. Buck's burn-mixture. The following is the formula for its preparation:—

℞. Gum Tragacanth..... ʒ ij.
Gum Acacia..... ʒ iv.
Molasses,
Aqua..... āā j

Mix the gum and water, and let them remain until thoroughly dissolved, and then add the molasses.

This is spread over the surface with a brush, forming a continuous coating, and if removed by the process of suppuration, it is to be immediately re-applied.

Syr. Acaciæ, with sufficient glycerine to make a liquid which can easily be spread, is sometimes used, and then covered with lycopodium.

SPRAINS.

The immovable apparatus is usually applied at once.

Immersing the limb in hot water, permitting it to remain for some time, and then applying a snug roller, is a most excellent method of treatment.

ERYSIPELAS.

A single case of erysipelas attacking an injured limb was treated by the immersion plan.

The limb was kept immersed in lukewarm water constantly for ten days, with exceedingly gratifying results.

Whether this method of treatment will be retained or not can only be determined by further use.

CHRONIC SYNOVITIS OF THE WRIST JOINT.

Dr. Burchard, one of the staff of the 2d Surgical Division, has devised a simple apparatus for applying

extension and counter-extension in these cases, which is very efficient, and productive of results satisfactory to the patient.

The indication is to entirely prevent the articular surfaces of the joint from coming in contact.

This indication is fulfilled by means of a wide palmar splint extending from the middle of the fore-arm to three or four inches beyond the fingers, narrowing as it passes beyond them.

At each corner of the upper end of the splint is a small slot. At the lower end of the splint is a round hole of a size proper to receive a violin key.

The splint is then padded in such a manner as to accommodate the irregularities of the limb.

Adhesive straps are now applied to the fore-arm, doubling upon themselves so as to form loops, passing from below upwards.

These loops are attached to the slots in the upper corners of the splint by means of tapes. This fastens the splint at its upper extremity. A broad band of adhesive plaster is next attached to the dorsum of the hand, passes a convenient distance below the fingers, doubles upon itself, and is attached to the palmar surface of the hand.

A small piece of board is then placed in the termination of this loop, in which a hole has been pierced for the reception of a piece of cat-gut, which is to pass out and become fastened to the violin-key.

The broad loop is then cut through in places corresponding to the interdigital spaces, and each finger-basket strapped, leaving the loop in its connection with the ends of the fingers intact.

The violin-key can now be turned, and any amount of extension made which may be desirable.

This apparatus is easily controlled by the patient, and the relief which it affords is sufficient guaranty that its application will be faithfully adhered to.

PNEUMONIA.

In my former note upon pneumonia I mentioned the plans of treatment which are adopted in this hospital. Since that time some cases have been treated by the quinine plan, 5 grs. three times a day, with excellent results.

There is one item in the management of patients who are the subjects of pneumonia which is of practical value, and that is, to insure perfect rest and quietude in bed until the disease has completed its course.

Occasionally patients die very suddenly in the progress of the disease, apparently, at least, from a failure in the heart's action incident to over-exertion, even as moderate as that which may be induced by simply getting out of bed.

That patients sometimes die very suddenly in the course of pneumonia has been noticed for some time, but the *rationale* of the untoward event has not been fully and satisfactorily given.

BRIGHT'S DISEASE.

It is believed that the occurrence of the severe nervous symptoms sometimes seen in connection with this disease, such as convulsions, can be warded off by the introduction of a proper plan of treatment.

The plan adopted is the diuretic plan, and consists in the administration of infusion of digitalis and bi-tartrate or acetate of potash.

These patients take half-ounce doses of the infusion three times a day, with varying doses of the acetate or bi-tartrate, and these remedies are continued for weeks or months in succession.

No hesitation is had with regard to these doses of digitalis, and in many cases very much larger quantities are given without any deleterious results being realized.

Not long since, however, a patient died in the water-closet, and at the post-mortem nothing was found to satisfactorily explain his sudden death.

The heart was hypertrophied, weighing ℥ xx, without valvular lesions, and coronary arteries normal. The kidneys were affected with chronic diffuse nephritis, which had gone on to the formation of a goodly number of cysts of variable size, from a filbert down.

Brain, normal.

Larynx, normal.

Lungs, normal. Some old pleuritic adhesions.

This man had been taking infusion of digitalis in half-ounce doses three times a day, and in the absence of any pathological lesion which would explain the sudden death, the cause was a question to be considered.

Nine of the house staff seemed to be unwilling to believe that death was produced by the digitalis, for two reasons: First, it did not accord with the experience afforded by the treatment of similar cases with the same remedy, and in much larger doses; second, that the article furnished in the institution is so poor that almost any one could take such doses with impunity.

The question, however, is not altogether unimportant.

SUB-ACUTE RHEUMATISM.

For the relief of the stiffness which remains about the joints, after an acute attack, the oleate of mercury and morphia is somewhat employed, and with very gratifying results.

The attention of the profession has been called to this compound by its author, in an article published in the last number of *Braithwaite's Retrospect*, where a more complete description can be found. Ringer also mentions it in his work upon therapeutics.

FROST-BITES.

A most interesting case has been in the hospital for some time, the interest involving the adjustment of a most important surgical question. In this case spontaneous amputation of the terminal phalanges had already taken place.

Spontaneous amputation of the long phalanges had almost taken place, and the question arose as to which was the proper method of management: to have the amputation to go on spontaneously a little farther, then disjoint the bones and remove them, trusting to granulations; grafting, in short, cicatricial tissue to cover the stump, or to amputate with the knife farther back, so as to secure original skin structure for a flap to cover the stump.

The reason given for a knife amputation, and the formation of a flap from the original skin, was, that cicatricial tissue is always easily irritated when subjected to pressure, as it inevitably must be, more or less, in a stump; and hence would be the source of constant trouble to the patient in the future.

The case was left, however, to heal by granulation and cicatrization, and the soundness of the procedure can only be determined by future observation.

PREPARED EARTH.

This material is used in dressing surfaces which have a gangrenous offensive discharge, like the sloughy surfaces following frost-bites.

The earth is spread upon a cloth, and wrapped about the sore, and will remain twenty-four hours without becoming very offensive.

The material is specially prepared at Philadelphia,

and can be obtained for the nominal sum of $3 per bbl.

I suppose that any clayey earth, perfectly dried and thoroughly pulverized, will answer the purpose equally well.

STRANGULATED HERNIA.

A case of this kind was brought into the hospital a few days since, of sufficient age to give evidence that peritonitis had already commenced.

The hernial tumor being somewhat distended, Dr. Van Wagenen procured an aspirator, with which the tumor was emptied of its serous contents. After this operation the hernia was reduced with the utmost ease, thus avoiding the cutting operation.

The patient subsequently suffered from complete suppression of urine, and died somewhat suddenly.

Post-mortem examination revealed the fact that the intestine involved in the hernia was in a perfectly healthy condition, and there were no evidences of peritonitis.

Edœma of the lungs was found, which was considered as the probable immediate cause of death.

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THE MEDICAL RECORD:

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THE MEDICAL AND SURGICAL HISTORY OF THE WAR OF THE REBELLION.*

THESE two splendid volumes are before us. They comprise the first parts of the Medical and Surgical History of the late war, respectively, and we need not say that, while they have been anxiously looked for, they are most cordially welcomed by the profession. It has been thought better to announce the introductory volumes of this great national work, in an editorial, rather than under the form of a review or bibliographical notice.

Being magazines of facts, statistics, and deductions, and in truth reviews and compilations of the writings, reports, statements, and data of a multitude of independent observers, it appears more appropriate to make such observations as we have to offer, under this form, rather than in the ordinary way of review or notice.

The stupendous array of figures, and the variety and number of recorded facts which they contain, while they reveal the character and quality of the individual labor and discipline requisite for their elucidation and presentation in elegant and intelligible shapes, serve as a warning to the rash reviewer who should attempt an independent analysis with the idea of picking flaws or discovering discrepancies.

The separate departments are introduced by prefatory notices from Surgeon-General J. K. Barnes, U. S. A., which acknowledge the liberality of the Government in providing means for their publication, and make cordial and suitable acknowledgments to the medical officers, both regular and volunteer, for their zealous co-operation in furnishing the more or less crude material from whose almost primeval chaos this world of medical and surgical knowledge has been constructed, and irradiated with the light of intelligent selection, adaptation, and co-ordination. Due credit is given to the principal artificers, Dr. J. J. Woodward, U. S. A., and Dr. George A. Otis, U. S. A., whose analytical skill and discrimination, patient research, and self-sacrificing labor, together with their synthetical ability and reconstructive power, have resulted in the triumphant erection of the foundation upon which the finished edifice will speedily appear in all its completeness and beauty.

The first year of the war revealed the fact that the methods in use in the medical department of the army, and the traditions and usages of that branch of the public service, were wholly inadequate, incomplete, and obsolete. A revolution took place, and while the original form remained, and a few traditions, preserved in the minds of the older men, held sway, radical and thorough reforms were introduced, with the immediate effect of quickening into life and activity the small but able and well-disciplined body of men who composed the active members of the regular medical staff, and the large number of new officers who hastened from civil life to offer their services, and if necessary their lives, to the commonwealth.

The appointment of a young, able, and bold man to the office of Surgeon-General, and the aid afforded by the best members of the medical profession, many of whom had had military experience, corroborated and stimulated by an anxious and thoroughly aroused public sentiment, gave force and efficacy to these measures; and the immediate result was witnessed in the abundance of medical supplies, facilities for the transportation of sick and wounded men, splendid field and permanent hospitals, and intelligent methods of economizing and systematizing professional labor on the battle-field, securing returns, reports, and histories of cases, conveying immediate succor to the wounded and disabled, and providing for their ultimate care and attention till death, or more or less perfect recovery.

It is just to Dr. Wm. A. Hammond, formerly Surgeon-General, U. S. A., to record that the beginnings of these great changes and radical reforms were made under his administration, and that he confidently and intelligently looked forward to the great results which have flowed from them for the benefit of science and humanity.

It is also due to his successor to affirm that these measures have been ably and consistently supported and directed under the administration of Brig.-Gen. Barnes, both during the war and since its happy termination. Great credit is also due to Dr. John H. Brinton, of Philadelphia, late Surgeon U. S. V., who laid the foundation of the Army Medical

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Museum, and made a commencement of the Surgical Department of the Medical and Surgical History. The method at that time adopted was found to be impracticable on account of the vast amount of labor it would entail, and it was in 1865 changed for the method as adopted and carried out in the works before us. Space does not permit the publication of the introductory chapters entire, and we do not see very well how any clear idea of their scope, and the reasons for the plans accepted and employed, can be given by extracts. The system adopted by Dr. Brinton contemplated a history by battles and campaigns, with enumeration of the forces employed, topographical description of movements of troops, with returns of killed and wounded, supplemented by recorded conditions of climate, weather, hygiean supplies and facilities for transportation, reports of operations and methods of treatment, and descriptions of wounds, injuries, diseases, and their results. The method adopted is a classification by regions of body and character of injury, with short personal histories and illustrations, and references to the Army Medical Museum. A chronological table of battles and engagements is furnished, with Federal and Confederate killed, wounded, and missing. In the medical volume tabulation of disease is made by regions of country and military departments, with reference to the influence of climate, locality, and temperature. Distinction is made in the tables between white and colored troops, and valuable facts are developed with reference to their relative idiosyncrasies and susceptibilities.

The figures of the Adjutant-General's office show the whole number of troops enlisted during the war to have been 2,073,112. The mean strength, 544,704, present; 196,803, absent—741,507, aggregate. The total number of deaths from disease included in the tables, which comprise officers and men both regulars and volunteers, was 166,623; of colored troops, 29,004—making an aggregate of 195,627.

The whole number of deaths amounts to 304,369. Of these, 44,238 were killed in battle, and 26,168 is the estimate of prisoners dying in the hands of the enemy.

Dr. Woodward concludes that his tables cover about nine-tenths of the class of facts they are intended to embrace.

The following is a consolidated table from Dr. Otis's introduction to the surgical volume:—

He states in explanation as follows:—

"The aggregate of 235,583 gunshot wounds here given, with resulting mortality of 33,653, or 14.2 per cent., is explained in the introduction to the medical volume to represent the total returned from about nine-tenths of the mean strength of the Union army, and to be exclusive of the injuries of those killed in action. The latter category (as has been just stated) embraces, according to the Adjutant-General, not less than 44,238; according to the alphabetical registers of the Surgeon-General's office, 35,408; according to the Chronological Summary, 59,860." In a note he states: "The chronological summary compiled by the faithful and indefatigable Chief Clerk of the Surgical Division, Mr. Frederick R. Sparks, indicates the following losses: *Union troops* killed, 59,860; wounded, 280,040; missing, 184,791. *Confederate troops* killed, 51,425; wounded, 227,871; missing, 384,281. The last aggregate includes the armies surrendered. Allowing for many exaggerations and omissions, the errors appear to balance remarkably, and the results to correspond with statistics derived from entirely different sources."

Classification.	White Troops.		Col'd Troops.		Total.	
	Cases.	D'ths.	Cases.	D'ths.	Cases.	D'ths.
1 Burns	9,487	94	613	4	10,100	98
2 Contusions	44,323	161	2,649	11	46,972	172
3 Concussion of brain	873	193	49	22	922	215
4 Compression of brain	61	17			61	17
5 Drowning		672		125		797
6 Sprains	38,387	3	4,317		42,704	3
7 Dislocations	2,908	9	108	1	3,016	10
8 Fractures	1,287	53			1,287	53
9 Simple fractures	4,215	61	131	15	4,346	76
10 Compound fractures	1,316	378	55	19	1,371	397
11 Gunshot wounds	229,119	32,731	6,466	922	235,585	33,653
12 Incised wounds	21,444	186	1,305	3	22,749	189
13 Lacerated wounds	14,153	459	595	8	14,748	467
14 Punctured wounds	5,285	191	499	8	5,784	199
15 Poisoning	3,087	93	67	17	3,154	110
16 Other accidents and injuries	13,099	1,003	2,174	72	15,273	1,075
Aggregates	389,044	36,304	19,028	1,227	408,072	37,531

He goes on to say:—

"However useful these approximations may be for many purposes, any anticipation that they may afford reliable guidance or much assistance in framing a surgical history of the war, must prove illusory. But the consolidation of the dates of the detailed quarterly surgical reports might be justly expected to furnish a very complete record of the surgical practice in the Union army during the latter two years of the war; and for the last year the classified return of wounds received in action should serve as a nearly accurate check list."

A second note is an answer to some of the strictures of Mr. T. Longmore, Deputy Inspector-General of the British army, which appeared in the 54th volume of the Medico Chirurgical Transactions, apropos of Circular No. 6 from the Surgeon-General's office, 1865. A little further on—page xvii. of the introduction—Dr. Otis says: "From a surgical point of view, there was no motive to exclude information that could be obtained of the Confederate wounded. *Le vrai chirurgien ne regarde pas l'uniforme.* Estimates of the ratio of wounded to the forces engaged and other attempts at approximations to unattainable numerical precision, were held to be very subordinate to the accumulation of the greatest possible number of practical surgical facts." This sentence is the key to the method pursued in arranging or classifying the vast mass of facts brought under observation. That the effort has

been wonderfully successful will, he believes, be the verdict of the profession throughout the world.

The conclusion of the introduction to the surgical volume contains a list of medical officers who were killed or who died through accidents in the direct line of their duty, and of those who were wounded in battle. Of this number, eighteen were killed in action. Thirteen were killed by partisan troops or assassinated by guerillas. Eight died of wounds received in action. Nine lost their lives by accident in the performance of duty, and seventy-three were wounded in battle.

This list of casualties, greater proportionally than that experienced in any other staff corps, should, as Dr. Otis justly observes, be sufficient to correct the popular fallacy that in time of battle the post of the medical officer is one of comparative freedom from danger.

It is a truth which all the officers and soldiers of the late war will support by their testimony that the Medical Staff yielded to none, whether in the line or staff, in coolness under fire, unhesitating acceptance of the situation irrespective of danger, privation, or hardship, uncomplaining fortitude, and faithful and heroic performance of duty. Some of them, indeed, in emergency did some *tolerably good fighting*, and, temporarily laying aside the green sash, acted as aides and staff-officers for their commanding generals. We never, however, heard of such services being mentioned in orders. The only return made was the private thanks of the general thus and often deeply obliged, and a slight increase of consideration when requests were made for additional facilities for the comfort and care of the sick and wounded. The dryness of tables and figures—which rise, however, to the sublimity of all that is great, heroic, tragic, and pathetic, when the conditions which their naked outlines represent are understood and considered—is compensated in the Appendix to the Medical volume which contains abstracts from the personal reports of medical officers, and the reports of the Medical Directors of armies, corps, and divisions.

These documents illustrate the real medical history of the war. They are most interesting and valuable historical records, and indicate a high degree of intelligence, not alone professional but administrative, military, and comprehensive. They show that the profession of the country, whether trained in the army, in metropolitan centres, or sparsely and recently settled districts, was capable of grasping and dealing with the great emergency in which the country found itself suddenly involved. They breathe the purest spirit of humanity irrespective of politics, and reveal a high degree of cultivation of both mind and heart. They indicate a degree of medical culture beyond what we are apt to acknowledge in our periodical onslaughts on the medical colleges. More than this, they display the acute practical common-sense of the American *mind* which often rises to the level of genius. The war developed first-class soldiers and first-class military surgeons, out of what, at first sight, and to a European, would have seemed the most unpromising and even hopeless material.

We must conclude the present article reluctantly, for want of space, by recommending to the American Medical Association, at its next meeting in St. Louis, to petition Congress for an appropriation sufficient to publish an edition of the Medical and Surgical History, large enough to place a copy in the hands of every medical officer and private physician who served in the late war, and also to furnish copies for sale at cost. We think a vote of thanks should be passed to Congress for what it has done, and that measures should be adopted to express, in some tangible and emphatic manner, the sense which the profession of medicine entertains for the invaluable services of the learned and accomplished compilers and editors of this great work. We do not endeavor on this occasion to draw any practical conclusions from the facts and figures presented. The completed history (two more volumes in each department are to follow in due season) will be a mine for research and reference to those engaged in special studies and in estimating the value of particular operations and surgical procedures, as well as of medical pathology and the history of disease. We may assume that, in such a vast mass of statistics, special and peculiar conditions will to a great extent balance one another, and that numerical results will, at least, closely approximate exact truth. The sense of the profession educated in civil life and of that department of the profession which has had military experience on a large scale, will, we think, be found to harmonize with the results of the statistics, and the value of probability in forming a judgment in a particular case will be greatly enhanced and become a guide, encouragement, or conservative correction, as the circumstances may demand.

Another important point consists in the fact that this treasury of fact and recorded experience will serve together with other works of the same nature, to inform and instruct the profession in such a manner that it will be prepared to cope promptly, energetically, and intelligently with the catastrophes of future wars, if such should unhappily arise.

An admirable work could be constructed out of these materials as a text-book on military medicine and surgery, and if such should be done it ought to be a compulsory text-book in every medical college. We hope, finally, that these volumes, so honorable to the profession throughout the country and to the Medical Bureau of the United States Army, will have their legitimate influence upon statesmen, legislators, and professed politicians, and cause them to recognize the claims which *legitimate* and *catholic scientific* medicine has upon just and equitable legislation. To recognize the fact that no

sect in medicine could have approximated these results, that science and humanity go hand in hand, *that quackery is an immorality*—that the defence, support, and encouragement of legitimate organized medicine is essential to the good order of society, national prosperity, the happiness of individuals the honor of the country, and the perpetuity of the institutions which the profession of medicine has thus given irrefragable evidence of its zeal, learning, skill, courage, and self-sacrifice in upholding and maintaining.

We have, on a former occasion, ventured the opinion that the Army Medical Museum, in addition to its function, strictly pathological and illustrative, had served as a warning to our lawgivers, and had had an influence in favor of arbitration instead of war. The study of the work before us will intensify that impression, and we recommend it from that point of view to statesmen and *able editors*, in the hope that hereafter all possible expedients, consistent with honor, will be exhausted before recourse be had to war.

If the dark and terrible side of the picture of the pomp and circumstance of glorious war, which these calm statistical scientific books present, can be appreciated, and exert their influence in accomplishing such a result, it will be a greater triumph for the profession than that achieved by their extraordinary merit.

The illustrations and maps are remarkable for their excellence, correctness, and beauty, and the typographical execution is in the highest style of the art.

Reviews and Notices of Books.

HAND-BOOK OF PHYSIOLOGY, by WILLIAM STENHOUSE KIRKES, M.D., edited by W. MORRANT BARKER, F.R.C.S., etc., with 248 illustrations. Eighth edition. Philadelphia: Lindsay and Blakiston. 1872. Pp. 835.

THIS edition is in great part a reprint of the one of 1869, the changes made having slightly lessened the number of pages, but, on the other hand, have considerably increased the value of the work, since by them it is brought quite up to our present knowledge of the science. The reduction in size (less than ten pages) has mainly been caused by the omission of matter relating to questions which, at the date of the seventh edition, were still under discussion, but are now considered to be settled. Nearly every chapter in the first part of the book has undergone more or less change, and additions more important than extensive are frequently to be met with; for example: new matter has been introduced into the chapters relating to the chemical composition of the blood; the leucocytes and their movements within and through the walls of the vascular system; the phenomena of the heart's action; the mucous membrane of the alimentary tract, and the one on animal heat. Paragraphs have been added treating of the tests for biliary salts; of the formation of glycogenic matter in the liver; and a very considerable addition which has been made to the article on the physiology and anatomy of the lymphatic system includes our present knowledge of its vessels, spaces, and glands. The histology of the spleen is for the first time mentioned, and in speaking of the skin, its function in regulating the heat of the body is likewise introduced with this edition. Under the head of the nervous system we find new matter relating to the physiology of the facial, pneumogastric, spinal accessory, and vaso-motor nerves, and the description of nerve fibres has been much improved.

We also observe that several statements have been retained which might, we think, have borne modification; among them we mention the one which classes the nipple among the tissues whose erection is due to vascularity; also the statements that when one kidney is removed its fellow becomes enlarged, and that when the inhibitory influence of the par-vagum is suspended the heart's contractions become *stronger*.

On the whole, there is very little in the book which either the student or practitioner will not find of practical value and consistent with our present knowledge of this rapidly-changing science; and we have no hesitation in expressing our opinion that this eighth edition is one of the best hand-books on physiology which we have in our language.

AIDS TO THE DIAGNOSIS OF DISEASES OF THE KIDNEYS, by W. R. BASHAM, M.D., F.R.C.P., etc. Philadelphia: Lindsay and Blakiston. 1872.

THIS book is a collection of sixty nicely-drawn figures, with forty-eight pages of descriptive text; the illustrations containing examples of all the most typical pathological and extraneous objects found in the albuminous urine from forty-one patients. Short and succinct accounts of the latter are given, together with the general character of the symptoms, their duration, and, in all cases where it could be ascertained, the termination in death or recovery. In many of the fatal cases, the lesions found *post-mortem* are mentioned, but little or nothing is added in the way of comment or theory on the part of the author, so that the book is a bare statement of clinical facts, and, as such, will be of value to every physician who uses the microscope in his practice. The only uncomplimentary thing we can say of the book is, that on page twenty-eight an error occurs which ought not to have crept into a book of such dimensions, viz.: the reference to fig. 3 is evidently out of place, and fig. 4 and fig. 5 should read instead fig. 3 and fig. 4. In all other respects we are well pleased with it.

FAMILY THERMOMETRY. A Manual of Thermometry for Mothers, Nurses, &c.—By EDWARD SEGUIN, M.D. New York: G. P. Putnam & Sons.

DR. SEGUIN, already well known to our readers by his useful abridgement of Wunderlich's treatise on the thermometer, continues to pursue his favorite subject in a new field, subordinate, but, in the writer's estimation, not less important than that of the use of the thermometer by physicians. This concerns the habitual employment of this instrument, by intelligent non-medical persons having charge of the sick, in the intervals of physicians' visits. Dr. Seguin urges the necessity of regularly *training* such persons in the art of measuring temperatures, with an emphasis that is sometimes a little fanciful, and also often eloquent. He takes "mothers as types of the women who devote themselves to men from birth to death," and describes the indignation or despair with which those who are once alive to the importance of their task, may (perhaps more properly, *should*), recognize their present unfitness for it. "Seeing everything around them co-ordinated according to certain laws,—they wonder how it happens that they alone in their professional capacity of breeders of men, have no rule to abide by. . . Re-

flecting upon their own present status in the field of labor, and upon the incommensurable value of the products of their loins and vigils, women cannot suppress their apprehensions, or disgust, at being obliged to raise our children in health or in disease, without having been taught how to do so."

The manual essentially contains: 1st. A general explanation of the effect of disease in modifying the temperature of the body. 2d. An explanation of the method of recording these variations by the thermometer. 3rd. Certain details of prognosis, based upon these variations. 4th. Various practical suggestions for the use of heat and cold in domestic practice, in sudden emergencies or in the absence of a physician. Under each of these heads the author says much that is good, and also some things that we should criticise. It is good that women be accustomed to apply the thermometer at the first sign of illness, and record the observation for the future reference of the physician; but it is surely an exaggeration to tell them that "the thermometer is the only guide," and that "all diseases are *ustorius*." Equally unsafe to permit them to form a prognosis from rise of temperature alone, for how shall they distinguish between the significance of the hyperpyrexia of a continued fever, and in the paroxysm of an intermittent or of an insignificant inflammation, as a furuncle, that in children so easily determines high fever? Again, we do not see the advantage of substituting a special thermometer, with a norme of health, for that in ordinary use, on the ground that "the melting point of snow, or the freezing point of mercury, has no interest for a mother, since they are far remote from the range of health, disease and death." On the other hand many of the categoric propositions are of real value to women sufficiently intelligent to appreciate, and sufficiently sensible not to be encouraged by them to amateur meddling." Heat is the most integral expression of life." "Life is secure when the production and consumption of heat are balanced." "Allay consuming heat." "Recall or accumulate departing heat." "Quench the thirst even of him who cannot drink,—feed through whatever channel him who has no stomach." "Remedy by external appliances, unequal distribution of heat." "The kettle has cured more cases of croup than medicines." "When a child is confined to school-rooms, crowded dormitories or manufactories, his mother must at every opportunity study his temperature."

We sincerely commend Dr. Seguin's book to the class of mothers for whom he writes it.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, January 25, 1873.

Dr. Ellsworth Eliot, President, in the Chair.

NEW MEMBERS.

The following gentlemen, recommended by the Comitia Minora, were granted certificates of membership:—Beverly Robinson, 39 W. 35th st., a graduate in Medicine at the University of Paris, France, in 1872; Albert H. Buck, 50 E. 31st st., a graduate in Medicine at the Col. of Phys. and Surg., Med. Dep. of Columbia Col. in 1867; Thomas E. Satterthwaite, 50 E. 31st st., a graduate in Medicine at the Col. of Phys. and Surg., Med. Dep. of Columbia Col., in 1867; Read J. McKay, a graduate in Medicine at the Bellevue Hosp. Med. Col., in 1867; Charles Y. Swan, Astor House, a graduate in Medicine at the Col. of Phys. and Surg., Med. Dep. of Columbia Col. in 1856; Jacob F. Howe, 52 Great Jones st., a graduate in Medicine at the Col. of Phys. and Surg., Med. Dep. of Columbia, Col. in, 1871; William F. Gellhar, a graduate in Medicine at the New York Med. Col., in 1864.

DEATH OF MEMBERS.

The President then announced the death of the following members of the Society:—Lewis Tice, M.D., a member since April 22d, 1872, who died at his residence in this city, Dec. 23d, 1872, aged forty-five years. Dr. Tice graduated in Arts at Union Col., Schenectady, N. Y., in 1848, and in Medicine at the University of the City of New York, Med. Dep., in 1851.

Dr. Guillermo Michelena, a member of the Society since Nov. 25th, 1872, died at his residence in this city, Jan. 15th, 1873, aged fifty-six years. Dr. Michelena graduated in Medicine at the Univ. of Caracas, Venezuela, in 1840, and at the Univ. of Paris, France, in 1847. He was head Surgeon of the Charity Hospital in Caracas for fourteen years; Rector of the Univ. of Caracas for three years; Professor of Obstetrics and Surgery in the same institution for three years; member and censor of the faculty of the same; M.D. by examination at the Univ. of Havana, Cuba, and President of the medico-legal society of Havana.

REPORTS OF COMMITTEES.

Dr. Castle, of the committee on intelligence, made a report on the progress in the department of Obstetrics and Gynæcology.

Dr. Russel, Chairman of the Committee on Diseases, then reported through Dr. A. B. Judson, the following facts regarding the sickness and mortality from various causes in this county during the year 1872, the report being accompanied with charts. During the period mentioned there were reported to the Bureau of Sanitary Inspection of the Health Department, 157 cases of *typhus fever*; 616 of *typhoid fever*; 3,037 of *scarlatina*; 1,259 of *measles*; 714 of *diphtheria*, and 2,386 of *small-pox*.

"The mortality of the year 1872, as we anticipated in a former report, was very excessive; being nearly 5,500 over that of any previous year in this city. A better idea of the sudden increase by which it was marked, will be conveyed by the following figures, extending back for ten years:

Deaths in	1863,	25,196.
"	1864,	25,645.
"	1865,	24,843.
"	1866,	26,815, (1,158 from cholera.)
"	1867,	23,159.
"	1868,	24,889.
"	1869,	25,167.
"	1870,	27,157.
"	1871,	26,976.
"	1872,	32,647.

Up to 1866 the death rate of these years was considerably augmented by the fatality attending wounds and diseases contracted in the war of the rebellion. In 1867 there was a marked decrease to 23,000 deaths, and from that time up to 1870 the increase was progressive. In 1871, a very healthful year, there was a slight diminution, and in 1872, an enormous rise in mortality. We shall compare the deaths in 1872 with those in the preceding year, in order to show that particular diseases were concerned in this increase. The peculiar influences, meteorological or otherwise, which contributed to so large a mortality, are not alto-

gether apparent, as the rise in weekly mortality began to be noticeable in the very beginning of the year, and continued to the end. Such causes were certainly not confined to this city, as every large eastern city from which we have yet received returns, participated to even a greater extent in the same trouble. During 1872, as compared with 1871, the increase in Boston was 34 *per cent.*; in Providence and Philadelphia 28 *per cent.*; in Brooklyn 23 *per cent.*, and in New York only 21 *per cent.* That of Cincinnati was normal —about 6 *per cent.* A large territory along the Atlantic was thus overspread by the same disturbing elements. The summer's heat was certainly remarkable, and its humidity high, to which circumstances we may attribute much of the mortality of the hot season and early autumn; but the meteorological phenomena of the rest of the year offered no features extraordinary enough to account for the unwonted death-rate.

The zymotic class of affections produced 8,364 deaths during 1871—31 *per cent.* of the total; and 11,922, in 1872—37 *per cent.* of the total; an excess of 3,558 deaths, or of 69 weekly. Every important disease of the miasmatic group shared in this increase save *relapsing fever*, whose mortality in both years was so trifling as to warrant its exclusion from the list which we now present:

DEATHS FROM	1871.	1872.
Small-pox	805	927
Measles	409	463
Scarlatina	791	990
Diphtheria	238	446
Croup	466	675
Whooping-cough	465	565
Typhus fever	65	86
Typhoid fever	239	364
Typho-malarial fever	12	25
Intermittent fever	110	111
Remittent fever	165	193
Cerebro-spinal fever	48	782
Puerperal fever	80	117
Diarrhœal diseases	3,653	5,197

It will be perceived from the foregoing that the three most fatal epidemics of the year were those of scarlatina, small-pox, and cerebro-spinal fever. We may regard scarlatina as our most constant epidemic, and its mortality in 1872, although greater than in 1871, was not up to the average. If we accept as an approximation to the truth the number of *cases* reported to the Bureau of Sanitary Inspection, its mortality approached 32 *per cent.* 725 of its deaths occurred among children less than five years of age; 193 between five and ten; 38 between ten and fifteen, and 34 among those over fifteen years; the oldest being a male between forty and fifty. Of all the deaths from this cause, 667 took place within the first six months of the year.

The epidemic of *small-pox* was a continuation of that of the previous year. It reached its culmination in the spring, its highest weekly mortality having been 51 in the week ending May 25th. It abated during the summer months, and continued under control afterwards. 552 of its victims were males, and 377 were females. It exhibits a greater disparity between the sexes, chiefly among adults of foreign birth, than any other disease. This is doubtless owing to the better facilities for revaccination enjoyed by the females of the poorer classes over their male relations, who are commonly absent at work during the visits of the vaccinating physicians. 552 deaths were of natives and 377 of foreigners. The great preponderance of native deaths is to be accounted for by the fact of 409 having occurred in children under ten years old, the vast majority of whom were of native birth although of foreign extraction. There were retained in the city 617 cases which came to the notice of the health authorities. 316 of these, or over 50 *per cent.* proved fatal. Many of these were only discovered by the certificate of death, and of course many who recovered had been sequestered, and thus escaped observation. Therefore the ratio of deaths given must be regarded as exaggerated. The 11th and 17th wards suffered the most severely, having respectively 60 and 78 deaths, 44 *per cent.* of all which occurred in the city proper, out of 17 per cent. of its entire population. Four persons between 70 and 75 years old, and one between 80 and 85, were carried off by this disease.

Cerebro-spinal fever became epidemic early in the year, and up to December 31st destroyed 782 lives. The first death from this cause in New York was recorded in 1861—or, at least, "spotted fever" was assigned as the cause of death in a single instance. No similar case was recorded until 1866, during which year there were registered 18 deaths from "cerebro-spinal meningitis." The same disease was credited with 32 deaths in 1867; with 34 in 1868; with 42 in 1869; with 32 in 1870, and with 48 in 1871. Most of these cases seem to have been regarded as *idiopathic* cerebro-spinal meningitis, if there be such a thing. The proportion of deaths to cases of this disease, as it prevailed here during the past year, cannot even be estimated, as we have had no means of ascertaining the number of recoveries. 415 of its deaths were in males, and 367 in females; 642 of native, and 140 of foreign birth. The same explanation of the excess of native mortality is applicable to this affection as to small-pox, 530 deaths, or 68 *per cent.* having occurred among children under ten years old. After that age the number diminishes rapidly in each successive quinquennial period of life—the two oldest deaths having been reported as between 65 and 70. As to the etiology of this disease, the circumstances of its first cases, and many subsequent ones having been found in dwellings where defective drainage existed, seemed to point to emanations from privies and sewers as its chief exciting cause. Its appearance, however, almost simultaneously in many portions of the United States would indicate a pandemic origin. But we do not deem it expedient to discuss theories.

There is nothing of interest to be noted with regard to the deaths by *measles* and *croup*. *Diphtheria* was particularly fatal during the latter portion of the year; its deaths in the last quarter averaging 21 weekly.

261 males and 304 females fell victims to whooping-cough. There are two interesting facts which distinguish the fatal cases of this affection in New York, viz.; 1st, its being confined *exclusively* to children under 10 years old, no cases in persons beyond that age having been recorded since 1865, and in that year but one, whose age is given as between 50 and 60. We have before adverted to the universal preponderance of females over males among the fatal cases of this disease, as quite characteristic. The United States Census, for 1870, shows 3,987 deaths of males against 5,021 among females, from whooping-cough, throughout the country. Of these 9,008 cases only 143 were over 10 years old, one of which was over 80 years. The remaining diseases of this order exhibited no unusual peculiarities, except in the case of *diarrhœal affections*, which produced an enormous mortality during the hot season. That our excessive summer mortality is due almost entirely to heat, is shown pretty well upon the chart

which accompanies this report, where the fluctuations of the death-line are seen to correspond closely to those of the line of mean temperature.

Syphilis caused 139 deaths, of which number 110 were congenital cases. It is somewhat curious that of the latter, 63 were males and only 37 were females.

Six deaths were due to *hydrophobia*.

Alcoholism was returned as the direct cause of death in 314 instances. In 1871 deaths from this cause amounted to 220. Of the last year's deaths *delirium tremens* occasioned 102. Intemperance was certified to be either the direct or complicating cause in altogether 826 cases—over 2 daily. Seventy-five *per cent.* of the cases were in males.

Constitutional diseases caused 6604 deaths against 6263, in 1871. The principal ones were as follows:—Four deaths were due to *gout* (2 males and 2 females); and 152 to *rheumatism* (62 males and 90 females). The latter affection has steadily been increasing in prevalence and fatality within the five years past. To *cancer* were referred 392 deaths, against 335 in 1871. Cancer of the uterus caused 95; of the stomach, 87; of the breast, 55; of the liver, 48. Of the cancers of the breast and uterus, 74 occurred in married women, 56 in widows, and 11 in single women. Of the whole number of cases, 96 were natives and 296 foreigners; a remarkable difference in favor of the native element, obtaining equally among males and females, for we find that cancer of the liver destroyed 24 of each sex, of whom but 6 were natives.

Tuberculous and *scrofulous affections* caused 6023 deaths. The most interesting of this order, viz.:—*phthisis pulmonalis* carried off 4274 persons—13 per cent. of the mortality from all causes—its lowest relative mortality since 1866. In 1871 its deaths amounted to 4186—a percentage of 15.5 of the total. Of the deaths caused by it in 1872, there were 2176 males and 2098 females; 1461 were natives and 2813 foreigners—the latter being about double the former.

The class of *local affections* occasioned 10,903 deaths, against 9,280 in 1871. The chief varieties were as follows:—Disorders of the nervous system, 3479. Of these *cerebral meningitis* and *encephalitis* caused 962; *apoplexy* and *paralysis*, 577; *insanity*, 65; *epilepsy*, 94; *convulsions*, 922; and direct effect of *solar heat*, 320. The last is the greatest number of deaths from this cause ever known in New York. 212 occurred during the week ending July 6th. In point of mortality from all causes (amounting to 1591) the week mentioned was the most remarkable one in the history of this city. Upon a single day, July 2nd, there occurred 351 deaths. It will be seen by referring to the chart that the highest mean temperature was reached on July 1st, and was immediately followed by a corresponding rise in the death-rate.

Of disorders of the circulatory system, *aneurism* (mostly aortic) caused 72 deaths, and *heart diseases* 894.

Diseases of the *respiratory system* caused 3,649 deaths, against 3,248 in 1871. Of these, bronchitis was credited with 1,040, and pneumonia with 2,150. The latter disease was so prevalent during the first half of the year as to almost assume the character of an epidemic, 1,393 of its deaths having occurred in that period. One-half of its total mortality was among children less than five years old.

To affections of the digestive system were ascribed 1,330 deaths, of which the principal were: *diseases of the liver*, 478; *enteritis* and *gastro-enteritis*, 321; *gastritis*, 118; and *peritonitis* (idiopathic, so called), 146.

Urinary affections were credited with 1,174 deaths, 1,064 of which were due to *Bright's disease*. *Nephritis* and *uræmia* caused about the same number as in 1871. *Diabetes mellitus* was assigned as a cause in 25 instances—16 males and 9 females. Singularly enough the same number of such deaths, and the same proportion between the sexes, was observed in the previous year.

Diseases of the generative system produced 59 deaths; of which 26 were cases of *ovarian tumor* or *dropsy* not operated upon, and 10 of *metritis* (non-puerperal).

Diseases of the locomotory and osseous systems caused 159 deaths: and affections of the integument, 40.

Affections peculiar to new-born children were credited with 965 deaths—635 being credited to *premature* or *abnormal births*; the rest being mostly *malformations*.

Diseases of the puerperal state caused 476 deaths, against 381 in 1871.

Age was certified to have caused 393 deaths, 7 of which (1 man and 6 women) were reputed to have passed 100 years—cases somewhat apocryphal.

There were due to accident or negligence, 1,108 deaths, 219 of which resulted from *drowning*; 116 from being *run over*, and 305 from *falls*. There were 69 homicides, but no executions. Of the 144 suicides, 50 were by *poison*, 32 by *shooting*, 22 by *hanging*, 16 by *cut* or *stab*, and 13 by *drowning*.

Of the total mortality, about 50 *per cent.* was in children less than 5 years old. There died 1,553 persons of 70 years and upwards. The total number of deaths was 32,647, giving an annual death-rate of 32.6 in each thousand inhabitants, the population being estimated at one million.

THE PAPERS OF THE EVENING.

Dr. T. Addis Emmet read to the Society a paper on "Laceration of the Perineum involving the Sphincter, and Operation for Securing Union of the Muscle." The whole paper has been published under the head of *Original Communications*.

Dr. Bozeman, being called on by the President, expressed his satisfaction at the able manner in which Dr. Emmet had presented the subject of extreme lacerations of the perineum, and had little to add excepting in relation to the treatment of lacerations, which also involved the recto-vaginal septum, which Dr. Emmet had not fully touched upon. The extension of the rupture into the septum adds very much to the gravity of the accident, and increases very considerably the chances of failure in an operation. This had been the case in his own early operations, and it was not until later that he learned that it was owing to the attempt, on the part of the operator, to accomplish too much at once, viz.: to close both the fissure of the septum and of the perineum at the same operation. For fifteen years past he had followed the plan of making two stages, closing, first, the septum, and, after an interval of five or six weeks, the perineum. He complimented Dr. Emmet upon the success which resulted to him in the use of the interrupted suture, which was one of the earliest forms of suture employed, and was still the favorite with many of our most skilful operators. For himself, however, he preferred the quilled suture of Dr. Roe, which was, also, the one chiefly in use in England, especially by Mr. Baker Brown, whose success in the use of it had not been excelled by any other form of producing union.

Dr. Bozeman had himself employed at the outset of his experience the interrupted suture, but had suffered

so many failures as regards the union of the recto-vaginal septum, that he had adopted the quilled suture instead. With the perineum his success with the quilled suture had been much better. Dr. Pancoast had also complained of this difficulty in all his early operations.

Dr. Bozeman was of the opinion that for practical purposes, the quilled suture was to be preferred to the one described by Dr. Emmet. When it is used, as in any case, great care needs to be paid to the paring of the edges of the rupture. It is his custom to make the denuded surface from one-half to three-fourths of an inch broad, in order that by the extensive apposition all passage for flatus or fæcal matter might be cut off.

Where Dr. Emmet uses four or five sutures, Dr. Bozeman is accustomed to employ only three. The first one is employed in very much the same manner as the first one introduced by Dr. Emmet, though brought out differently and in a manner which he would not then undertake to describe. It should be introduced an inch from the denuded surface and almost on a level with the anterior margin of the recto-vaginal septum, and brought out two or three lines from the median line. The second suture he would place about two-thirds of an inch above the other, and a short distance outwards; the third in a line with these, or at an angle of nearly 45° with the median line. Into the loops formed by the suture he would introduce a piece of quill or bougie, and by drawing the stitches tight a perfect adaptation and slight eversion of the edges will be produced. Four or five superficial sutures will serve to bring the edges nicely together.

The deep sutures, which are the most important of all, he does not disturb under forty-five to forty-eight hours, though it is rarely necessary to leave them longer. The superficial sutures, however, he leaves for five or six days; almost invariably a perfect union results. Cases have come to him in which failures have resulted from making the denuded surfaces too narrow, thus leading to the formation of recto-vaginal fistula, and in other instances leaving a septum too thin to withstand the forces likely to be brought to bear on this part. It is customary with him to leave a catheter in the bladder for four or five days in order to prevent any contact of urine with the cut surfaces, and to keep the patient on her back until the third day, when she can be laid on either side for two or three days, and then turned on to the back again. He also approved the administration, after the operation, of opium in doses of one grain every four or six hours to produce rest, and to keep the bowels confined. The latter condition is to be maintained, if possible, for ten or twelve days.

Dr. Benjamin Howard then read to the Society a paper on "The Cure of Urinary Perineal Fistulæ with Stricture, without the ordinary Cutting Operation," which mainly consisted of the report of a case in which this complication of stricture was speedily cured by causing a catheter to be retained in the urethra, so that no urine was permitted to pass through the fistulous canals.

Dr. Stein hesitated in responding to the invitation of the President, since he could add very little to the statements made by Dr. Howard, and all he should say would be in confirmation of them. He observed, however, that several questions of importance were involved in the treatment of stricture, and not the least was that of the location of the disease and its character as dependent upon location in the fibrous or the sub-mucous connective tissue; and assumed that strictures seated in the fibrous tissue of the corpus spongiosum do not yield by any means of treatment so readily as when they are confined to the sub-mucous connective tissue. He mentioned in confirmation of this a case in which internal urethrotomy and gradual dilatation were powerless to effect a cure, owing to the disposition of the tissues to contract, and in which external urethrotomy had ultimately to be made.

Dr. Stein also related a case showing the effect of extra-urethral abscess in producing stricture.

Dr. Wm. T. White also related a case which he observed a year ago, and which, he thought, seemed to prove what Dr. Howard said with regard to the disposition of urinary fistulæ to close when relieved of the passage of urine. The patient in question had congenital phymosis, with a prepuce adherent to the glans. An operation was made for the cure of the phymosis, and a number eight sound being introduced, a stricture was discovered at a distance of three inches, and in further examination with a filiform bougie was found to be an inch in length. The day was dark, and the patient behaved badly under chloroform, and considerable difficulty attended the examination. Twelve days after the exploration of the stricture, one and a half inches of the calibre of the urethra corresponding to the seat of the stricture sloughed out, and two-thirds of his urine passed through this fistulous opening in the perineum. Subsequently the opening was closed by taking flaps of skin from the scrotum, and during the process of healing (about two weeks) a catheter was retained in the bladder. The patient has since had no trouble in passing his urine. Dr. White had not been able to discover any cause for the stricture, the trouble in passing urine, like the phymosis, having always existed within the patient's recollection.

The President announced that Dr. J. C. Peters would read the next paper to the Society on the subject of the last revision of the Pharmacopœia, and stated that members of the College of Pharmacy were expected to be present, and take part in the discussion of the paper. He further called attention to the approaching meeting of the State Medical Society, and urged the delegates from this Society to be present promptly.

The Society then adjourned.

Correspondence.

PERCY'S ALKALOID HYPOPHOSPHITE.

AN ANSWER TO DR. E. PEUGNET.

To the Editor of the Medical Record.

Sir—In the Medical Record for March 15th is an article by Dr. E. Peugnet on the above chemical preparation. The Doctor styles it *so-called*, and cautions me that I must not nullify my physiological chemistry "by adopting either preconceived ideas or an unsupportable hypothesis."

Dr. Peugnet again says, "Dr. Percy, in his Prize Essay, has given us an almost complete chemical history of Phosphorus down to the present time; but we regret that he did not enter more fully into its toxicology." I regret to say that Dr. Peugnet has overrated my "chemical history," for I have, in truth, given but a very limited chemical history of such an important organismal element. But I have endeavored to give, and I think I have given, a more complete and thorough insight into its physiological distribution throughout the system; the ubiquity of its presence in some one or other of its chemical forms; the peculiarities of the chemical conditions in which

it exists in different organs; and the derangements which an organ may suffer by a mere chemical change of this important element. In short, I supposed that I had given but little of the chemistry, but that I had entered very fully into the animal and vegetable physiology of the element.

In every fully reported "Case" in my Essay the toxicological appearances were fully observed, and there are no cases that I have reported in which I have not fully pointed out "the morbid and deleterious effects of excessive and inordinate doses"* of phosphorus and its preparations. Dr. Peugnet evidently means *antidotal effects*, instead of "toxicology;" but, if so, he has not done me justice, for I have in numerous cases administered and thoroughly tried all the asserted antidotes and found their worthlessness, and have, in their place, pointed out a new and reliable antidote—oxygen. Dr. Peugnet seems to agree with most of the reviewers who have read my Essay, for he says, "The essentially original part of the Essay is that which relates to his so-called hypophosphite." I feel that they, and he too, will do me more justice if they will re-read my Essay.

It always seemed to me that it was necessary, before we tried any therapeutical experiments with a substance, that we should understand thoroughly what the substance was, and what were its chemical reactions: whether it was unlike all the known components of the system, or whether it was similar to some existing element therein. In the first 39 pages of my "Prize Essay," I have given a large number of analyses proving the presence of peculiarly varied and mobile combinations of phosphorus in all the living tissues of man and animals. Several years were spent by me in experimenting in like manner upon vegetables, and many analyses are given that are so new that I am not aware of similar labors, or results in any way approximating them; and I have in these numerous instances shown (in Dr. Peugnet's own words) that the vegetable as well as the animal "organism is a vast and complete chemical laboratory," self-appropriating and elaborating, not only the kind, but the quality of the organismal element it stands in need of.

I do not know where in chemical writings there are more chemical errors than in his paragraph commencing "Basing himself," et seq.

He tells us that lecithine is a "*neutral* phosphor*etted* fatty matter," and in the same sentence that it is "an *acid* phosph*ate;*" that it "is composed of nervine in combination with oleic *acid*, margaric *acid*, phosphoglyceric acid."

I believe in my Essay that I have stated, from actual observations and many experiments, that the "oleo-acide-phosphoric" of Fromy is a hypophosphite, and not a phosphate, and answers to all the tests of a hypophosphite until chemical "tortion" converts it into a phosphate. As I understand this sentence, Dr. Peugnet makes this assertion simply as all others have made it before him, and not that he has disproved my observations by any analyses of his own.

Mr. Spangenberg prepares according to my formula some of my alkaloid hypophosphite, and Dr. Peugnet, like myself, tried it therapeutically in some cases of nervous debility, and found it of very great value, producing beneficial effects that other medicines had failed to do. The Doctor then tests it chemically by macerating it in water, and by the several well-known chemical reactions he proves that it contains hypophosphorous acid ($3HO+PO$), and not a trace of phosphoric acid. His chemistry in this well-known test is quite correct. He then states, "it is therefore evident that this preparation is *not* an alkaloid, but that it is anhydrous hypophosphorous acid" (PO).

It is a well-known chemical fact that anhydrous hypophosphorous acid (PO) has no separate existence, and all the celebrated chemists, Graham included, failed to produce it. Hypophosphorous acid exists only in combination with water, two equivalents being necessary for its existence; the third equivalent may be exchanged for some base, but the two equivalents of water enter even into all its salts (MO, 2HO, PO). Rob it of either of these two equivalents of water and the acid is destroyed.

I endeavored by many means to form a hypophosphite without the combining equivalents of water, and succeeded at last in making it combine with other elements than water. I found in the brain a hypophosphite in combination with fatty matter without any combining water, and by numerous experiments I made the same substance. I have succeeded in finding a new base and a new combining element, for hypophosphorous acid; but this substance is not, as Dr. Peugnet asserts, *anhydrous* hypophosphorous acid (PO), but that acid in combination with two equivalents of fatty matter, and the other equivalent may be either fatty matter or some base, as a nitrogenous compound or an alkali (as for example KO, 2?, PO, using the arbitrary formula ?, to express the fatty body). Here at least is a chemical discovery, but not one at variance with the laws of nature.

But Dr. Peugnet, in his analysis, takes my alkaloid and subjects it to the decomposing agency of water, a substance for which it has the greatest affinity, for like all other chemicals it is decomposed by a stronger affinity, and enters into new combinations. I have shown, on Page 15 of my Essay, that its affinity for water is so great that it robs the water of combination even from sulphuric (HO, SO_3) and hydrochloric acids. In this analysis the hypophosphite has a stronger affinity for water than for the fatty and other bodies, and therefore the oleo-hypophosphite is decomposed.

And so on analyses the Doctor finds hypophosphorous acid (HO, 2HO, PO), and therefore concludes that I have formed simply PO without other combining elements. He does not examine the fluid for any other substance, and simply states that by the distillation of the remaining fatty matters no pure phosphorus was eliminated. There should have been, for there were phosphates still remaining in the beef extract.

The Doctor's analysis, after digesting the fluid with animal charcoal, is certainly incorrect, and he will prove it so if he tries it again; for he will find both superphosphate of lime and hypophosphite of lime: he says he obtained only hypophosphorous acid.

I do not think I need a better analysis than this of Dr. Peugnet's to prove that I am perfectly correct.

In my formula I dissolve phosphorus in a fatty substance, and by the direct action of oxygen convert it into hypophosphorous acid (PO), that at the moment of its generation takes to itself three equivalents of glycerine, and forms an oleo-hypophosphorous acid. Dr. Peugnet proves the correctness of this by finding (when the substance is put into water) hypophosphorous acid (HO, 2HO, PO) that there was no phosphorus left, and no phosphoric acid present. The process is the same without the beef extract, and the analysis would have the same result, for if either of the combining equivalents is changed, the whole is converted into another substance. He simply decomposed my oleo-hypophosphite into hydrated hypophosphite; had he used a greater heat he would have converted it into a phosphate. He proves that after

* Webster.

his decomposing agent, water, was added, there was nothing present but hydrated hypophosphorous acid; it could not exist as PO, that is, hypophosphorous acid, without any combined element, and therefore it combined with the oil.

In another paragraph, in which the Doctor speaks of a "liquid preparation similar to the first case he made with lard oil," he is reasoning *à priori*, and upon an "unsupportable hypothesis," for he disproves every word of his reasonings by his own previous analysis, in which he finds hypophosphorous acid (HO, 2HO, PO); he needs no hypothesis to argue out what possibly might be present, or to imagine certain decompositions; he has his own facts to prove the presence of hypophosphorous acid, and the absence of any other formula. He proves what I claim—a new chemical discovery.

Throughout the whole argument Dr. Peugnet tells us he found hypophosphorous acid, that is, a lesser oxide of phosphorus; at his conclusion he calls it a hyperoxide, that is, a greater oxide, a "so-called" phosphate.

I feel thankful to Dr. Peugnet for his honest, earnest, and labored criticism. I may be full of errors in my "hypothesis." If I am, I hope to elicit truth, and if I can elucidate any new facts I shall benefit the profession and necessarily, through it, the public.

I have discovered another and an easier means of making an oleo-hypophosphite, which, instead of tasting disagreeably, rather detracts from the oily taste of any oil in which it may be combined; it gives to the oil a rather pleasant sub-acid taste. When my investigations are more complete I will publish them to the profession.

I suggested in my Essay that I was at work endeavoring to prepare an organismal hypophosphite of a better formula than there presented, one such as exists in living animal and vegetable tissues. I have, I think, prepared from the germ of the wheat, from the fine inner bran, and from the brains of fish, a substance containing all that is contained in the alkaloid hypophosphite, and, in addition, phosphites, phosphates, and free hypophosphorous acid.

Unfortunately, the alkaloid I recommended in my essay is disagreeable to the taste, and some persons do not like to take it on account of this taste; the Vitalized phosphates I have now prepared have not that objection, as they are quite pleasant to the taste.

These Vitalized hypophosphites may be obtained for the use of the profession at Caswell & Hazzard's, Fifth Avenue Hotel, and corner 6th avenue and 39th street.

SAMUEL R. PERCY, M.D.

47 West 38th street, New York, March 31st, 1873.

ARMY NEWS.

Official List of Changes of Stations and duties of Officers of the Medical Department, United States Army, from March 19, 1873, to April 4, 1873.

McKEE, J. C., Surgeon.—Granted leave of absence for six months on Surgeon's certificate of disability, with permission to go beyond sea. S. O. 57, A. G. O., March 19, 1873.

BILL, J. H., Surgeon.—Assigned to temporary duty at David's Island, N. Y. H. S. O. 55, Department of the East, March 22, 1873.

ALDEN, C. H., Surgeon.—Granted leave of absence for four months, with permission to go beyond sea. S. O. 56, A. G. O., March 18, 1873.

TILTON, H. R., Assistant Surgeon.—Assigned to duty as Post Surgeon at Fort Wadsworth, N. Y. H. S. O. 55, c. s., Department of the East.

COUES, ELLIOTT, Assistant Surgeon.—Assigned to duty, as Medical Officer and Naturalist, with the expedition for the survey of the Northern Boundary. S. O. 68, A. G. O., March 31, 1873.

STYER, CHARLES, Assistant Surgeon.—Leave of absence extended to include May 10, 1873. S. O. 66, A. G. O., March 28, 1873.

EWEN, C., Assistant Surgeon.—Assigned to duty at Little Rock, Ark. S. O. 47, Department of the Gulf, March 24, 1873.

WINNE, CHARLES K., Assistant Surgeon.—Leave of absence granted for six months from April 15, 1873, and his resignation accepted by the President, to take effect October 15, 1873. S. O. 55, A. G. O., March 15, 1873.

Medical Items and News.

MEDICAL SOCIETY OF COUNTY OF HUDSON, N. J.—At the regular meeting of the District Medical Society for the County of Hudson, N. J., held at the Court House April 1st, 1873, the following officers were elected to fill vacancies: *President*, Dr. D. B. Carpenter; *Vice-President*, Dr. S. R. Forman; *Treasurer*, Dr. Everett. Dr. H. M. Eddy was elected Reporter to the State Medical Society. At the regular meeting in March the following members were elected delegates to the State society: At large, Drs. Lutkins, Reeve, and Carpenter; Representatives, Drs. Vondy, Hunt, Buffett, Noble, and Craig.

MEDICAL LIBRARY AND JOURNAL ASSOCIATION OF NEW YORK.—At the stated reunion of this association, held March 28th, 1873, Dr. John C. Peters, President, in the chair, Dr. Beverley Robinson, graduate of the School of Medicine, Paris, read an important paper on "Cardiac Thrombosis in Diphtheria," in which the following conclusions were brought out:—

1st. Cardiac thrombosis is a tolerably frequent complication of diphtheria.

2d. Fibrinous, elastic coagula, twisted between the valves, or which adhere intimately to the walls of the heart, form before death.

3d. These coagula are often produced, apart from the agony, in children who are far from having reached extreme feebleness; for he has recognized them several times when the child appeared convalescent,—when everything betokened an early recovery.

4th. They cause very grave symptoms, which may give rise to suspicions of their presence.

5th. The diagnosis of these concretions is important, from the double standpoint of the prognosis and treatment; since, on the one hand, their existence in the course of diphtheria renders the fatal termination almost sure; and, on the other hand, it makes the operation of tracheotomy useless, at least in some cases.

6th. The polypiform clots are frequently the proximate cause of the very grave state in which the patient is found, and not the result of this state itself.

7th. Death may occur in a sudden manner immediately after the detection of the thrombosis, or else after a state of anxiety or anguish, more or less protracted.

Drs. Leaming, Putnam, Jacobi, and the President made remarks on the paper.

ERRATUM.—In our issue of April 1st, it was announced that Prof. William T. Frink would read a paper at the stated meeting of the N. Y. Academy of Medicine, April 17th, on "The Etiology and Indications for the Treatment of Irregular Uterine Action during Labor." The name of the speaker should read Prof. William T. Lusk.

GIFT TO PROF. AGASSIZ'S MUSEUM.—Mr. John Anderson, of New York, the well-known tobacconist, has presented Prof. Agassiz with an island in Buzzard's Bay, upon which to establish his proposed Summer School and Museum of Comparative Zoology, also the sum of $50,000 towards the permanent fund for the Museum. The Legislature of Massachusetts also proposes to appropriate $50,000 to Prof. Agassiz's project.

CORNWALL.—Mr. H. B. Cornwall, of the New York School of Mines, has accepted the assistant professorship of Analytical Chemistry and Mineralogy in the School of Science of Princeton College, N. J.

THE NEW YORK SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—At the 50th annual meeting of the above named Society, the following named gentlemen were elected officers for 1873:—

President, Dr. John O. Stone; *Vice-Presidents*, Dr. J. R. Van Kleek, Dr. L. T. Hubbard, and Dr. John G. Adams; *Treasurer*, Dr. J. W. G. Clements; *Managers to serve three years*, Dr. Jared Linsly, Dr. A. Underhill, Dr. E. L. Beadle, Dr. J. O. Smith, Dr. Gouverneur M. Smith, Dr. Joel Foster, Dr. Thomas F. Cock.

At a subsequent meeting of the Board of Managers, Dr. Gouverneur M. Smith was elected Secretary of the Society, and Drs. William C. Roberts, James H. Anderson, and Robert Watts elected managers to fill vacancies in the Board occasioned by the deaths of Drs. H. D. Bulkley and C. Henschel, and by the election of Dr. Hubbard to the vice-presidency.

The Society has funds invested amounting to about ninety thousand dollars, and at this date extends aid to six widows and three children of its deceased members.

A CITY OF THE DEAD.—During the year 1872, 6,573 persons were interred in Greenwood Cemetery, Brooklyn, N. Y., making a total of 161,376 inhabitants of the necropolis.

A NEW HOSPITAL AT BALTIMORE, MD.—J. S. Hopkins, the well-known millionaire of Baltimore, Md., recently deeded to trustees thirteen acres of land, bounded by Wolfe, Monument, Broadway, and Jefferson streets, for the erection of a hospital for the relief of indigent sick and orphans. At a late meeting of the Board they were notified by Mr. Hopkins that he had further dedicated $2,000,000 worth of property for the support and maintenance of the hospital. The hospital buildings will be on a magnificent scale.

MEDICAL COMMENCEMENTS.—The commencement of the Jefferson Medical College, Philadelphia, Pa., took place March 12, 1873, at the Academy of Music; 149 graduates received diplomas.

The Medical Department of the University of Pennsylvania held its annual commencement at the Academy of Music, Philadelphia, March 13, 1873. Diplomas were given to 99 graduates.

The first commencement of the College of Physicians and Surgeons, Baltimore, Md., was held at the Masonic Temple, February 18, 1873. Diplomas were presented to 18 graduates.

The 52d commencement of the Medical College of Ohio was held in Pike's Opera House, Cincinnati, March 1, 1873; the degree of M.D. was conferred on 94 graduates.

The commencement exercises of Rush Medical College, Chicago, Ill., took place February 19, 1873; 62 candidates received diplomas.

At the recent commencement of the Missouri Medical College, St. Louis, 21 graduates received the degree of M.D.

ELECTRO-THERAPEUTICS.—A new monthly journal especially devoted to electro-therapeutics, under the name of *Il Galvani*, is to be started in Urbino, in Italy.

COD-LIVER OIL.—The editor of the *Nashville Journal of Medicine and Surgery*, in reviewing the history of that periodical, which was commenced January 1, 1851, alludes to an original article in the first number, entitled, "Six Cases of Phthisis Pulmonalis Treated by Cod-Liver Oil," by D. W. Yandell, M.D., of Louisville, for the purpose of recalling the fact that these were "the first original cases upon tuberculosis treated by cod-liver oil published by an American physician;" "the first published in the English language having been by Dr. C. J. B. Williams, in 1849, consisting of notes of 234 cases."

MEDICAL SOCIETY OF THE STATE OF NEW YORK.—Since the organization of this Society in 1806, 145 medical men have been elected *Honorary Members*; of these 119 were non-residents of the State; 71 only are now living. 416 *Permanent Members* have been elected from the years 1813 to 1871, inclusive; of these, 306 are now living. The Regents of the University have conferred the honorary degree of Doctor of Medicine upon 115 gentlemen on the recommendation of the State Medical Society; of these, 49 have died. Eligible for election as permanent members, 134. Eligible for election as honorary members, 14. Of the 48 ex-presidents, 30 have died. 54 county societies are represented in the parent society, representing 2,432 members. The average attendance at the annual meetings held in Albany in February of each year, is about 350.

BRAIN DISEASES IN ENGLAND.—According to Dr. Charles Elam, of London, during the last thirty years, while the English population has increased thirty per cent., the mortality due to diseases of the brain has multiplied nearly four-fold. This he attributes to the fact that "the great development of railway and telegraphic communication has resulted in an enormous increase of business transactions, entailing a vast augmentation of the cares, worries, and anxieties of life. The brain, receptive of all impressions, and originating all volitional impulses, has a double load to bear in the economy, etc."

A NEW MEDICAL STUDENTS' JOURNAL.—A new periodical, called "*The Students' Journal and Hospital Gazette*," has been issued with the opening of the new year in London, England. It will appear fortnightly.

A PLEA FOR THE TRACTOR.—Dr. Wm. Goodell, of Philadelphia (*American Practitioner*, Jan. 1873), shows that the action of the vectis is mainly that of a tractor, and the aim of the operator should be to use the instrument as a hook, rather than as a lever.

SUICIDES IN NEW YORK CITY.—During the year 1872, 140 persons committed suicide in this city. In 1870 there were 108 suicides; in 1871 there were 112. Of the 140 cases, only 36, or about 25 per cent., were

natives of the United States. Germany takes the lead, furnishing 56 cases. Next to the Germans in the record of foreign suicides come the Irish, who furnish 19 cases. Of the whole, one-half of them were between 20 and 40 years of age, and more than one-third were between 30 and 40; 110 were males and 30 females; 35 of the 140 shot, and 48 poisoned themselves; 35 men and 13 women poisoned themselves, and Paris green was chosen in 25 cases out of 48.

STRICTURE OF THE RECTUM.—Dr. White, of Bath, in his "Observations on Stricture of the Rectum," 1820, was the first English surgeon to write a work on stricture of the rectum. He made no mention of the venereal poison as a cause of stricture. This is also the case with Mayo, of London, 1833, and Frederick Tatham, 1833, and even Mr. Syme, 1839. Dr. Erskine Mason, in his paper on "Venereal Stricture of the Rectum" (*Am. Jour. Med. Sciences*, Jan. 1873), says the French were the first to have spoken on this subject. Richerand, in 1815, spoke of *condylomas internes* of the rectum. After somewhat extensive experience with this disease, Dr. Mason accepts *in toto* the views first advocated by M. Gosselin, in the *Archives Générales de Médicine*, 1854, and adds his quota to the proof that these *so-called syphilitic strictures* are in no wise due to syphilis, but arise from the local and non-infecting chancroid.

THE TEA QUESTION.—In the United Kingdom alone, in 1871, 123,401,889 pounds of tea were consumed.

In a paper by Dr. Adam Smith, read before the London Society of Arts, the use of tea was recommended in the following cases:—After a full meal, when the system is oppressed; for the corpulent and the old; for hot climates, and especially for those who, living there, eat freely, or drink milk or alcohol; in cases of suspended animation; for soldiers who, in time of peace, take too much food in relation to the waste proceeding in the body; for soldiers and others marching in hot climates, for then, by promoting evaporation and cooling the body, it prevents in a degree the effects of too much food, as of too great heat.

SLOW POISONING.—The secular and medical journals are constantly reciting cases of slow-poisoning from *green wall paper*, which is now so much in vogue. Mr. Joseph Hall, State Chemist, at Hartford, Ct., estimates that every square-foot of this innocent-looking paper contains an amount of poison equivalent to five grains of arsenious acid, or double the fatal dose for an adult person.

FŒTICIDE.—At the request of many of his former pupils, Dr. Hugh L. Hodge, of Philadelphia, has consented to the republication of his Introductory Lectures of 1839 and 1854, on "Fœticide or Criminal Abortion," being the opening of the course on obstetrics and diseases of women and children, University of Pennsylvania.

It has come to hand neatly gotten up in hand-book form, comprising 55 pages, and is published by Lindsay & Blakiston.

THE TEETH.—A series of short articles on "The Teeth: Notes on their Pathology," which originally appeared in the *British Journal of Dental Science*, written by Oakley Coles, L.D.S.R.C.S., are reproduced in monograph form, with well-defined illustrations from Brücke. J. & A. Churchill, of London, are the publishers. The author remarks "that they are now offered to the profession, rather as suggestive of fresh lines of thought, than as a finished contribution to dental literature."

THE WOMEN OF HUMBOLDT COUNTY OF CALIFORNIA.—Dr. Geo. L. Fitch, Little Lake, Cal. (*Pacific Med. and Surg. Jour.*, Jan. 1873) doubts if there is a real healthy woman within the limits of this county. The constant fog and cold winds exert a peculiarly depressing influence on women, and as a consequence their menstrual function is nearly always deranged, extremes in this respect being the rule. He speaks of a case of flooding for several hours in a child aged 9 years, whose pelvis was large. There was no hymen. She had not been tampered with. Seven months from the first attack the hæmorrhage from the vagina and uterus returned again, but not so badly as before. Cold cloths and gallic acid promptly checked the flow.

FREE PARKS AS SANITARIUMS.—A reprint from the *Northwestern Medical and Surgical Journal* gives Dr. J. M. Toner's practical article on "Free Parks and Camping-Grounds, or Sanitariums," for the sick and debilitated children of large cities during the summer months. Dr. H. C. Hand's chapter on "Infant Mortality" is appended.

MEDICAL RESPONSIBILITY AND MALPRACTICE.—This is the title of an excellent address delivered February 7th, 1872, by William C. Wey, M.D., late President of the Medical Society of the State of New York, at the sixty-sixth annual meeting. This, with the opening address delivered February 6th, 1872, is published in pamphlet form.

OVARIOTOMISTS.—J. B. Lippincott & Co., of Philadelphia, publish the paper prepared for the last meeting of the American Medical Association, by S. Fitch, M.D. Edin., of Portland, Maine, giving the peculiarities in the operations of the three following Ovariotomists: T. Spencer Wells, of London; W. L. Atlee, of Philadelphia; and Thomas Keith, of Edinburgh.

The important points advanced in the pamphlet are elaborately discussed in the late works of Drs. Peaslee and Atlee, to which the profession have so recently been directed.

DIPLOPIA FOLLOWING THE USE OF CHLORAL.—A case of this character, following the administration of this remedy, is reported by William R. Mandeville, M.D., A. A. Surg., Post Hospital, U. S. A., Aberdeen, Miss., in the October number of the *American Journal Medical Sciences*. A male, suffering from a carious dens sapientiæ, took ninety grains, in three doses of thirty grains each, within two grains. The next day the patient complained of seeing everything double, and of specks continually floating before his eyes—muscæ volitantes. This condition of his eyes lasted three days.

GOITRE IN GEORGIA.—According to the *Georgia Medical Companion*, there is a neighborhood on the head waters of Lott's Creek, Scarboro, Georgia, containing about fifty families, and spread over a territory of about five to seven miles, the female portion of which seems to be predisposed to this disease. There is rarely a female that has arrived at puberty that is not afflicted with it. It has been so with almost all the women raised there. There never was a male known to have it in that settlement. The disease yields readily to the iodine treatment. The soil is sandy, growth principally pine, interspersed with broad leaf jack. The drinking-water is obtained from wells, the average depth of which is about twenty feet. The locality is noted for its extreme healthfulness in other respects.

Original Lectures.

ON BRIGHT'S DISEASE.

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(Phonographically Reported for the MEDICAL RECORD.)

LECTURE I.

GENTLEMEN:—At my last lecture I described to you the pathological lesions of the different forms of Bright's disease of the kidney. This evening I shall speak to you of the symptoms which mark the developments of these anatomical changes, and I shall consider them in connection with the different stages of the disease which I described at my last lecture. Before entering in detail upon the history of these symptoms, I wish to say a word in regard to urea, the presence of which in the circulation is supposed to have very much to do with the production of very many, if not all the phenomena of the disease. I am aware that this statement requires some qualification, for there have been many theories advanced in relation to the poisonous element in Bright's disease. Some have maintained that this condition occurs independent of the urea, that the urea underwent decomposition, that ammonia was evolved, and that the ammonia was the poisonous element. Others that it is due to structural changes in the brain similar to those in the retina in neuro retinitis.

Others, again, have supposed that the changes in the nervous centres, particularly of the brain, which gave rise to the nervous phenomena of the disease, were due to œdema of the brain tissue. After carefully reviewing all the theories, and going over the experiments made relating to them, I must say that the theory which assumes that urea is the poisonous element which produces the condition known as uræmia is the most reasonable, and, at the same time, is better sustained by facts and experiments than any other. In health only a trace of urea is found in the blood. It is not produced by any special organ or tissue of the body, but is undoubtedly the united product of all the nitrogenous effete material of the body.

In health we eliminate about 500 grs. every twenty-four hours, and it is the office of the kidney to eliminate this urea. Now, whenever the function of the kidneys is interfered with or arrested, the urea accumulates in the blood; acting, it seems to me, as a direct irritating poison, interfering more or less with all the functions of organic life.

If a person takes a large dose of urea, as it were, at one draught, a violent and overwhelming influence is exerted upon the nervous system, the urea showing its effects by convulsions, coma, and death. If taken in small doses, the drinking carried on for a long time, its first effect is to interfere with digestion; secondly, it effects changes in nutrition, and all the elements of the blood become so changed, that no one of the functions of the body is carried on in its normal state. This seems to me to be the correct explanation of the nervous phenomena connected with the history of Bright's disease. First, that there is poisoning of the system by urea; second, by arterial tension and cerebral œdema. In detailing the symptoms of this disease, I shall speak first of those which mark the different stages of inflammatory form, or that form which I told you Virchow described as parenchymatous nephritis.

It has its seat, and all the primary changes are found in the tubules of the kidney. In connection with this form, the first thing that the patient notices ordinarily is slight œdema of the face. If he is in a weak condition from any other disease, at the time of the occurrence of the nephritis, you will find œdema commencing in other parts of the body, perhaps of the feet first, but, as a rule, the œdema commences in the face.

With the occurrence of the œdema there is a restlessness about the patient, which he cannot account for; he has headache, usually constant, which seems to increase in severity from hour to hour. If the patient is closely questioned, he will state that recently he has noticed some change in his urine; that it has been scanty, high-colored, and perhaps there has been some pain in the back, and along the loins. He has had frequent desire to pass urine. He may also complain of dyspeptic symptoms, some nausea, perhaps vomiting, which sometimes is a very troublesome symptom. Sometimes this symptom of vomiting is so troublesome, that the physician will direct his attention to the stomach as being the seat of all the trouble, and treat the patient for some gastric disease. There is more or less of febrile movement, as indicated by the acceleration of the pulse and elevation in temperature. The skin, as a rule, is more dry than natural; occasionally it is moist, but when it is, the perspiration has a peculiar urinous odor. This is a description of the milder form of the first stage of parenchymatous nephritis.

In a favorable case, a case of the best caste, after the patient has reached the condition described, he begins to improve; the urine is increased in quantity, the œdema gradually disappears, the head-ache moderates, the dyspeptic symptoms abate, and in the course of two or three weeks the patient has entirely recovered. In a large proportion of cases, however, no such favorable issue is to be expected. Instead of improving, the patient gets worse from day to day; the œdema is present not only in the feet and face, but extends over the entire body. All the cellular tissue of the body becomes œdematous externally and internally. Internally, the lungs become œdematous and we have dyspnœa. Dyspnœa however, in this connection, is not always dependent upon an œdematous condition of the lung, for there is such a thing as uræmic dyspnœa independent of any change in the lung tissue, but when the general anasarca just described is present, you will recognize that probably there is œdema of the lungs. The pulmonary œdema may also sometimes be accompanied with more or less pulmonary congestion, giving a watery expectoration, which will sometimes be streaked with blood. If the disease progresses, the anasarca will gradually increase, until the patient becomes perfectly water-logged. From this the still graver symptoms may occur indicative of approaching convulsions; convulsions may occur, coma come on, and death follow; death may also occur from some acute secondary inflammation. This is the history of many cases of the inflammatory form of the disease.

There is another class of cases, and quite a large one too, which do not recover or die, but become chronic. They go on, become water-logged more or less, have more or less œdema of the lungs and dyspnœa, and present a very pallid appearance. The pallor is peculiar; not like the clear pallor of phthisis, nor like the dingy pallor of cancer; but a peculiar pallor, not easily described, but which is peculiar to Bright's disease, and is easily recognized after it is once seen.

In these cases the œdema may gradually disappear, the appetite slowly return; the patient seems to be convalescing, and even gets into a comfortable degree of

health; he has passed through the first stage, through the second and into the third stage, or stage of atrophy. He now is in the stage of permanently enfeebled health; the œdema, however, never entirely disappears, and this is the peculiarity of this form of Bright's disease, even in the stage of atrophy. The patient, as a rule, does not get entirely rid of the œdema. It can always be detected by pressing firmly along the course of the tibia, or behind the internal malleolus, and is indicated by the little pit which can be made, showing that there is œdema of the cellular tissue. Another class of cases, in which the acute inflammatory form of Bright's disease is present, present symptoms more violent than either of the classes to which reference has been made. In this class of cases the patient is seized with a chill, has pain in the back and along the ureters with retraction of the testicles. There is delirium, great disturbance of the nervous system, and the patient presents an array of symptoms which are in every way urgent. The patient may pass into coma and die within two or three days. This is the very acute form of tubular or parenchymatous nephritis. In the clinical history of the inflammatory form of Bright's disease, there are three classes of symptoms which are of special importance, to which I will now particularly invite your attention. These are: (1) Those connected with the urine; (2) Those connected with the dropsy, and (3) Those connected with the nervous system. These three classes of symptoms are present in all cases of parenchymatous nephritis or the inflammatory form of Bright's disease. First, of the urine: In reciting the clinical history, I told you it was high-colored, scanty at first, and sometimes it has a smoky appearance. If it is examined for its specific gravity, that will be found high, perhaps as high as 1030. If tested for albumen, perhaps $\frac{1}{3}$ or $\frac{3}{4}$ of the bulk of the specimen will coagulate. If the urine is acid, testing with heat will coagulate the albumen, but if the urine is alkaline acid must be added first, or heat will not coagulate the albumen.

It is important therefore, that the testing should be done with the heat first, and then the acid and heat. The next thing to be determined is whether casts are present or not. What kind of casts do we expect to find? In the acute stage, those tube casts will be found which are made up of the different elements which I described in my former lecture as marking the pathological changes which took place in the uriniferous tubes, viz.: granular epithelial casts. Casts of this character are found in no other form of Bright's disease; not in the amyloid kidney, nor in the cirrhotic kidney, unless you have a complication by the ingrafting of the inflammatory form upon them. Whenever granular epithelial casts are found in the urine, you may be sure that there has been a recent inflammatory change in the tubules. There may also be present fibrinous, exudative matter, and it may be poured out into the centre of the tubular cavity; but the casts formed of this material under such circumstances will be of small size, what are called the *small hyaline* casts. The term hyaline used to be improperly called waxy. The material of which the cast is composed is simply coagulated fibrine.

With these casts of small size, are sometimes found more or less of what are termed blood-casts, fibrinous matter with blood globules, and sometimes mixed with this material, epithelial cells of a distinctly granular character. The epithelial cells may be simply thrown off and found lying loose in the urine.

If, therefore, you find a patient who furnishes urine of high specific gravity, containing granular epithelial casts, small exudative casts, and some blood globules mixed with them, you may be certain that the patient is in the acute stage of parenchymatous nephritis. There is no question, if he gives active symptoms, headache, more or less œdema, &c., which have been mentioned, and his urine furnishes us with the characteristics which also have just been described. As the patient goes on from this acute stage and passes into the stage in which the fatty changes take place in the tubes, whether he is to recover or not, the urine becomes more abundant, not so highly colored, specific gravity becomes lower, &c.

The specific gravity never gets very low in any stage until we reach the stage of atrophy. The specific gravity however is somewhat lower in the fatty stage than in the acute stage, and the quantity of albumen is somewhat diminished. These may be regarded, perhaps, as very good signs, but before positive opinions are expressed upon this point, it is important to determine what kind of casts the urine now furnishes. If fatty epithelium, and fatty and granular casts are found, you may be sure that the patient has passed well into the second stage of the inflammatory form of the disease. He has now what you may call a fatty kidney, if you choose. If you find along with this hyaline material, fine granular casts, you may be sure that he has something beyond the fatty change, and that the molecular changes which precede and accompany the process of atrophy have commenced. You have no more of the granular epithelial casts in this fatty stage, but you have hyaline casts which are of large size, and they will contain oil globules, and epithelial cells in which there are oil globules.

As the patient goes on to the next step, or stage of atrophy, the urine is increased in quantity, it *may* be very abundant; the high color diminishes or disappears; the specific gravity becomes lower, as low as 1010, and it contains very much less albumen than before.

The major portion of the casts now found, are large hyaline and fine granular casts; but in these casts there may be oily material, occasional fat globules, and occasional epithelial cells.

The patient now may get into a very comfortable condition; general health poor, it is true; not up to the normal standard; perhaps may have a little œdema of the feet, but as long as he takes good care of himself, keeps in a warm climate, he will get along very well, and may go on for a long time. What is the danger in such a case? The patient is not going to die from the kidney disease already existing; he is taking small doses of urea, it is true, but it is not sufficient to interfere with his general health to any serious extent; but his danger is, that some of these tubules which are doing the work may become the seat of an *acute inflammation*, and he may have the first stage of the inflammatory form of the disease ingrafted upon this stage of atrophy. The œdema may suddenly increase; general anasarca immediately follow, the patient pass into convulsions, and die suddenly.

(The Professor then related a case illustrating the danger in question.) A patient in this stage of Bright's disease, whom, in view of the danger, he had sent South to remain during the winter months, finding himself as he fancied well, after a month's sojourn in a warm climate, returned. Upon the first night of his return he went on a little spree, during which he was exposed to cold, had a chill, and within twenty-four hours had complete suppression of urine, was seized with a convulsion, and died. If this patient had taken heed to the advice given him, he probably might have lived comfortably for a considerable length of time.

So much for the urine: you readily see the import-

ance of understanding how to examine it, and also of making frequent examinations. I may say also, that it is quite important to make a quantitative as well as a qualitative analysis. You can prognosticate much better if you know how much urea the patient is passing, for it may suddenly diminish in quantity, evidencing that some trouble is approaching, which cannot be recognized in any other way. There is one obstacle in this, however, as yet, for the healthy significance of these changes is not perhaps fully understood; *i. e.*, the determination of how much a person may fall in his daily quantity of urea and not be particularly endangered by it.

We next come to consider the dropsy.

This occurs early, and is one of the symptoms which is present all through the course of this form of Bright's disease. Why it occurs I am not certain. Perhaps it occurs from a number of causes, and several explanations have been given: First, it is said to occur on account of a sudden withdrawal of a large amount of albumen from the blood.

It also occurs to some extent from the failure of the kidneys to eliminate the watery portion of the blood in the form of urine. Sometimes we have sudden œdema taking place associated with an almost complete suppression of urine. Under these circumstances, undoubtedly the drawing off of the albumen has something to do with the œdema, but the shutting in of the watery eliminations of the body has much more. There is another cause which is spoken of, viz.: that the capillary force of the circulation becomes impaired, on account of the poisonous effect of the urea in the circulation.

We know that wherever the capillary circulation is slow, there we are most likely to find œdema. Perhaps all of these alleged causes may be sufficient to explain the occurrence of the dropsy, and we will proceed to speak more particularly of its clinical history.

In the last stage, or stage of atrophy, or when the patient has what is termed chronic Bright's disease, you have in addition to the causes mentioned for the dropsy, the anæmic condition of the patient. The repair of the blood is interfered with as well as the repair of the other tissues of the body, placing it in a favorable condition for the occurrence of dropsy. I think it may be set down that dropsy is a necessary symptom of the inflammatory form of Bright's disease. In the stage of atrophy it may not be very marked, but there is some œdema still remaining. In the early stages of the disease, however, it is a very marked and constant symptom. We next come to speak with regard to the nervous symptoms which occur in this form of Bright's disease. It seems that there is a retention in the circulation of some element which has a peculiar effect upon the nervous system. If you please you may say that it is due to the retention of all the elements of the urine, but it seems more reasonable to suppose that the urea is the substance which produces the irritation, by its peculiar effect upon the nervous centres. The theories on this point I have already referred to.

The first thing perhaps that will be noticed will be a more or less severe headache accompanied by restlessness. A severe headache in Bright's disease always means something, and must not be disregarded, for it is often the precursor of more dangerous symptoms. If permitted to go on, perhaps we may have convulsions after a little time, and this may be followed by coma. Or, if the poisoning goes on more gradually the patient may first get drowsy, and then you may be on the lookout for coma. We are not so apt to have convulsions under these circumstances as when the poisoning takes place rapidly. The changes in the nervous system depend upon the changes which take place primarily in the nutritive processes of the body from the circulation of the poisonous element urea, and I believe that the dropsy and other symptoms depend very much upon the same cause. By remembering these few simple rules of the clinical history of this disease, you will be able, almost always, to tell where your patient stands, what form of the disease he has by the history, although you may not see him until he has reached the stage of atrophy, and by his history you can determine pretty certainly, if the case at the commencement was one of parenchymatous nephritis. In this form of Bright's disease we may have many complications, and the complications may cover up the ordinary symptoms of the disease.

The first complication I mention is the hypertrophy of the heart. This will not be found in the first stage of this form of the disease, but it will be found after the patient has passed into the chronic stage of the disease; perhaps in connection with the fatty kidney, but especially in the stage of atrophy.

This cardiac hypertrophy has come to be with me a very strong element in making out a diagnosis with regard to the different stages of this form of Bright's disease. To illustrate: a patient is brought into the hospital having convulsions; it is important to determine whether it is his first attack or not. The urine is examined, and all the elements are present which indicate an acute stage of the inflammatory form; but he may have the acute inflammatory form ingrafted upon the chronic form of the disease. Now examine the heart, and if hypertrophy of the left ventricle is found, without valvular lesion, it is almost certain that the patient has chronic Bright's disease, and that he is now suffering from an acute nephritis ingrafted upon a chronic, for in the first stage and first attack there is no cardiac change.

It is always present in the chronic stage. It occurs in the same manner as hypertrophy in general does, from an increased amount of labor. Impurity of the blood, if you choose, interferes with readiness of the circulation through the capillaries, and then you have the paralyzing influence of the capillary circulation, which is exhibited by the disturbance of the relations between the normal constituents of the blood and the vessels, which interferes more or less with the circulation. The heart must carry on this circulation, and it is this increased work that constantly increases its labor, and causes the hypertrophy. It takes some time to accomplish this, and it is not generally until after months of suffering in this way that the heart begins to show it, by gradual increase in the size of the left ventricle. This is a very important complication, for it enables us to determine whether a given case is in the acute or chronic stage of the disease.

Another class of complications relate to the lungs and bronchial tubes. We may have pulmonary œdema, congestion and pneumonia, and occasionally capillary bronchitis, and occasionally simple bronchitis.

Pulmonary œdema and congestion comes in an acute stage, and the reasons I have given.

Pneumonia occurring in connection with Bright's disease is always of a severe type, and is a complication in which the patient is continually in danger.

The patient may do well, but there is constant danger lest pulmonary œdema makes its appearance at the same time in other portions of the lungs, or that the pneumonia itself will extend.

Pneumonia is more apt to occur in the acute stage or fatty stage than in the stage of atrophy.

Inflammation of serous membranes is another complication.

I believe that the serous membrane most commonly affected is the endocardium. I am aware that in making this statement I shall be contradicted by some, but I believe that there are many cases of chronic valvular lesion of the heart which had their origin in this complication occurring in connection with an acute attack of Bright's disease.

Pericarditis, pleurisy, and occasionally meningitis, may occur as complications. It is important to remember that one of the most dangerous complications of the acute form of Bright's disease is inflammation of the serous membranes.

Another complication which may occur is a subacute inflammation of the mucous membrane of the stomach. The mucous membrane undergoes structural changes and patients never entirely recover from these changes.

Amaurosis is another complication. This occurs in the very acute stage, not as the result of neuro-retinitis which occurs in the chronic form. The patient may be perfectly well up to a certain time, then for two or three days, he may notice some œdema, has some dyspnœa, becomes delirious, has high temperature, and becomes blind. Under such circumstances the loss of sight is not due to neuro-retinitis, but to some effect of the urea upon the nervous system which produces amaurosis. Some say that there is œdema of the retina, but this is not now generally accepted. It is certain, however, that it is not a neuro-retinitis, for there is no evidence by the ophthalmoscope which points satisfactorily in that direction.

These are the important complications which are liable to occur in this disease, viz.: first of the heart, second of the lungs and bronchial tubes, third inflammation of the serous membranes.

We come now to speak of the causes of the inflammatory form of Bright's disease, or parenchymatous nephritis. The most common cause is exposure to wet and cold, or in other words, changes in temperature. This is proved by the fact that it occurs most frequently in those who are exposed to sudden changes in temperature. Firemen are a class of men who are very liable to suffer from this disease. That class of men who are accustomed to go on a "spree" are favorite subjects. It is not the alcohol that does it, for there is no evidence that this is a producing cause, but the man who gets drunk is very liable to subject himself to exposures which chill him, and in this way he developes his Bright's disease. It is not the alcohol, but the exposure to wet and cold which is so frequently associated with it. Sometimes a very simple exposure is sufficient, like removing the clothing on a hot summer's day, and sitting down by a window or in an open draft of air, a sudden chill follows, pain in the back, &c. Usually the exposure must be more severe than this, but exposure to wet and cold may be set down as the most common cause.

The next most frequent cause is blood poisoning. Under that head may be included all those diseases which depend upon a blood poison for their cause, such as scarlet fever, typhus fever, pyæmia, rheumatism, and the whole class of diseases which are recognized as due to blood poisoning are fruitful causes of Bright's disease in its inflammatory form. It occurs in scarlet fever because the patient has a poison circulating in the blood; but not every case of scarlet fever has Bright's disease. In some seasons, perhaps, almost every case of scarlet fever will be followed by it, and in the next perhaps not a single case will occur, because of the difference in the type of the fever. In certain types and intensity of the poison, there is a very strong exciting influence to the development of tubular nephritis. Another cause exists in certain irritating substances which may be taken into the stomach, and have the power of increasing the urinary secretion.

Among these are cantharides and balsam of copaiba. More than one case has been caused by these agents, having been taken in too large doses, for the cure of a clap. Another cause is pregnancy. It is developed not infrequently in pregnancy, not because, as was once supposed, of the pressure of the uterus upon the abdominal blood-vessels, and preventing free return circulation, but because during pregnancy, there is a larger amount of excrementitious substances to be eliminated by the kidneys, and these are the substances which are very liable to irritate the kidneys and give rise to tubular inflammation.

This portion of our subject is a very interesting one, but we must stop the discussion at this point for the present. At our next lecture we shall pass to the consideration of the other forms of Bright's disease and endeavor to reach the treatment.

COLLEGE OF PHYSICIANS AND SURGEONS, N. Y.

SURGICAL CLINIQUE OF

PROF. WILLARD PARKER, M.D.

INFLAMMATION OF FIBROUS STRUCTURE ABOUT SHOULDER.

GENTLEMEN:—The first case presented to-day is this man, who is fifty years of age and a laborer. Some weeks ago he received a blow upon the outside of his shoulder. Since the injury he has been unable to use the limb, has been carrying the hand in a sling, and has suffered more or less pain up to the present time. As a result of this quiet, it will be seen that the shoulder generally has atrophied, the result simply of non-use of the parts. Injuries about the shoulder are often exceedingly troublesome, and sometimes exceedingly difficult in the way of diagnosis. In order to arrive at a correct diagnosis, it is necessary that we should proceed properly with the examination; and first, nothing is more necessary than a perfect familiarity with the anatomical construction of the joint, the bones and ligaments which enter into its composition. One element should particularly be kept in mind, and that is, the long head of the biceps, which penetrates the capsular ligament and runs across the joint lying in the bicipital groove of the humerus. In the next place, the limb should be placed in a proper position for examination. The most favorable position is with the forearm at a right angle with the arm, seizing the lower end of the humerus with one hand while the other rests over the top of the shoulder.

If rotation is now made, trouble about the ligamentous structures can at once be detected, for the ligaments are placed upon a stretch, and the patient will immediately complain of pain. The same motion also will develop crepitus if it is present; and if luxation has taken place, the head of the bone will be recognized as being out of its normal position.

By crowding the articular surfaces together, it is easily determined whether inflammation of the sy-

novial membrane is present or not, by the presence or absence of pain produced. It is also important to recollect that in the young subject, usually under fifteen years of age (yet it may occur as late as thirty years of age), diastasis takes place, and this circumstance must not be overlooked.

Again, we sometimes have an injury of the long head of the biceps as it passes through its groove, and a subsequent inflammation excited in the groove. This point can always be felt by placing the fingers upon the front part of the shoulder and slowly moving them forwards, until the bicipital groove is reached which contains the muscle. By pressing upon that and rotating the humerus upon its axis, the patient will at once complain of severe pain if an injury has been sustained at that point.

In this case there is no disturbance produced upon manipulation, except an uneasiness which is produced by rotating the bone upon its own axis, and there is tenderness along the bicipital groove. The diagnosis then is, that we have an inflammation involving the fibrous structures around the joint, namely, the capsular ligament, and particularly that portion through which the long head of the biceps passes.

Prognosis is good.

Treatment is rest and moderate counter-irritation, either by tr. iodine or small blister. Rest is a prime element in the treatment of these difficulties, yet keeping them too still will sometimes postpone their recovery. A poor man who is obliged to work will sometimes get well much quicker than a wealthy man who may not be obliged to labor or take exercise.

LUXATION OF ELBOW-JOINT—SEQUELÆ.

The second case which is presented to-day is this boy, six years of age, who had a luxation at the elbow-joint about two weeks ago, and from which he still continues to suffer. At the present time, motion about the joint is quite limited, and there is numbness and inability to move the forefinger and thumb of the corresponding hand.

Again, in order to place yourself in the most favorable position for arriving at a correct diagnosis, you must adopt a proper method of examination. With regard to the elbow-joint, the proper position is with the arm and forearm placed at right angles with each other, the palm of the hand looking directly into the patient's face. In this position the bones of the forearm are placed parallel to each other, the internal condyle, olecranon process and external condyle are placed in a direct line, and the head of the radius is easily accessible unless some fracture, dislocation, or diastasis has taken place. In this case, all these anatomical prominences are in their normal position; hence, by exclusion, we diagnosticate that this was a case of simple luxation.

In luxation of the ginglymoid joints, it is amazing to see how easily they are reduced, while with the orbicular articulations a good deal of force is usually required to get the bones into place again; but it is wonderful to notice how soon a man can work again after having sustained a luxation at an orbicular joint.

With the ginglymoid articulations, the fact with regard to recovery is far different. They are easily reduced, but slow of recovery, and just the opposite is experienced in the orbicular joints.

The reason is simply this: a large amount of white fibrous tissue enters into the structures about a ginglymoid articulation, and when inflammation is set up in this tissue, there is always a shortening taking place, and with this comes a slow recovery. The question of interest now is, what are you to do with such a case, for this is the exact condition of affairs here,—motion is limited and the mother alarmed? It is all embraced in three words, so far as passive motion or operative procedure is concerned, and these are, *let it alone.*

There is, seemingly, an almost irresistible tendency on the part of some to use cold water in the treatment of affections of the joints. There is an indefinite amount of harm done by using cold water in these affections, and yet cold water is sometimes invaluable in the treatment of the same kind of cases as this one. The rule in its use is, never to use cold water about a joint so long as there is the least trace of inflammatory action left there. The trouble is that it will excite a new inflammation, and make the matter worse than ever. In the great majority of cases, if it is not well known what to do in the treatment of a joint, if warm water is used, the treatment will be advantageous: warm water followed by hand friction as much as you like. When, however, all tenderness, all heat is gone, and nothing is needed but simply to tone up the parts, cold water may be very serviceable. All that is then necessary is a simple dash, followed by dry friction, until reaction is thoroughly established. This is one of a class of cases that constitutes the *pons asinorum* of the young medical man, and too much care cannot be exercised when such a case presents itself. Keep the rules in mind which I have just indicated, and you will be always right.

CONGENITAL HYDROCELE AND HERNIA.

The next case presented is one of *Hydrocele* and *Hernia*, in an infant six months old, both double and both congenital. The herniæ are inguinal. Congenital hydrocele is rare. I have seen but few cases before this one.

With regard to such cases of hernia, I will tell you to what point I have arrived in their treatment, but you must exercise your own judgment with regard to following the same plan. For a good many years I have done nothing for these cases of hernia in young children as far as the application of mechanical apparatus is concerned. Formerly I was in the habit of treating them, but I have found out that it is worse than naught, for all these mechanical appliances irritate the child immensely, and do no good. Keep the child in as good condition as possible, and leave the hernia alone. When the child gets so that it can run alone, then adjust a truss, and in a great many cases it will then produce a radical cure. But, it may be asked, are not these cases liable to become strangulated? Strangulation sometimes occurs, but it is rare. I was once called up at three o'clock in the morning to operate upon a child nine months old where hernia had become strangulated, and the operation permanently relieved the child, but very rarely do we have any trouble in this direction. If they must be treated, the only thing of service before the child is old enough to run alone is the use of the adhesive plaster. This can be used very satisfactorily in cases of umbilical hernia, and in those cases it may be employed as early as desirable. Make a roll of adhesive plaster a little conical, like the end of the finger, and of sufficient size to fill the opening in the abdominal wall. Reverse the hernia, place this roll of plaster immediately in the opening, and over this a strip of plaster reaching to the back bone upon either side. This to me is the most satisfactory method of treating umbilical hernia in children, and you can almost always succeed in curing those cases. With regard to the congenital hydrocele in this case, that should be let alone. If desirable to do something, a little warm water and salt

may be used night and morning. If it does not go away within a reasonable length of time, the scrotum may be pricked with a fine needle. The little holes thus made will give escape to the fluid, and give rise to sufficient inflammation to close up the cavity. If this does not answer, a little thread may be passed through the scrotum, which usually is quite sufficient. In the performance of both of these operations great care must be exercised that the intestine is not wounded. This case, gentlemen, which I now present, possesses a great amount of interest.

CONTUSION OF SCALP.

One week ago this lad fell and caused this contusion of the scalp, and we now have to deal with a soft tumor of moderate size, technically called hæmatoma. The more common sort of these tumors or contusions are those we have in connection with parturition, particularly in connection with primiparous cases. The labor may be somewhat tedious, and there may be quite a tumor at the presenting part during the whole time, and when the child is born, the friends and probably the doctor will be quite astonished at the presence of a tumor of considerable size upon the child's head. What is to be done with this class of troubles? Let them alone and they will always go away without any trouble. Sometimes, however, it will be necessary to do something to assuage the anxieties of the friends, but be careful that nothing is done which will produce harm. The tumor consists of blood, and the blood does not coagulate, which makes the case so much the more favorable. These extravasations sometimes are of enormous size, but I have never seen any occasion to meddle with them. I saw one case where the tumor had been opened, and in that case a slough took place afterwards, and a portion of bone came away. I believe it is advisable to let them alone, entirely alone. The sharp ring-like edge which is felt in these tumors at the point of injury is a little deceptive. It is nothing but the thickened edge of the soft parts, and is not bone. This is a practical point, for many a poor fellow has had his scalp cut into under the impression that it was a proper case for trephining.

SYPHILIS.

This man whom you now see is suffering from tertiary syphilis, and that is the cause of this diseased bone upon his skull.

In connection with this case I will say a few words concerning the treatment of syphilis.

It generally occurs in those men who are addicted to the use of alcoholic drinks. It may be in the gentleman who takes his bottle of wine at dinner, or his hot drink at bedtime; who lives pretty thoroughly upon his tobacco, and then the third partner in the firm comes in in the shape of syphilis. The trio consists of rum, tobacco and syphilis.

A vast number of our men who undertake to treat syphilis, treat the syphilis alone, never thinking to break off the rum and tobacco. The patient can never get well under such circumstances. With these three enemies in the system what chance can the doctor have to rout one while the other two stand ready to neutralize his efforts by carrying in sustenance for the third? I make it my rule, never to undertake the treatment of a case of syphilis unless the patient will give up his tobacco and rum, and coöperate unreservedly with me in the management of his case, and then it is comparatively an easy matter.

This is a practical point worth abiding by. Again, whenever a man has a constitutional disease, whether scrofula or syphilis or tuberculosis, or other disease, that man's system is *below par*; it is never up to the getting-well point. The first great step then is to try and bring them up to that point. Syphilis demands the quiet effects of mercury. I am aware that I differ with many of my brethren in the treatment of syphilis, but I believe that the poison of syphilis can only be removed from the system in almost all cases by the judicious and wise use of mercury. This mercury is to be used wisely and in moderate doses, so as not to impair the vigor and health of the system. Very often it is important to make use of some tonic at the same time, such as quinine or the preparations of bark. These have been my convictions for a great many years, and I give them as the result of my own practical observation, and have never seen any reason to vary the conviction, that iodide of potassium alone cannot overcome the syphilitic poison in the system. The iodide of potassium, however, is a very valuable remedy in the treatment of syphilis, but it comes in after we have accomplished our purpose with mercury, in order to remove any deleterious effects of mercury which may be left in the system. Here its value cannot be overestimated. The powerful effect which the iodide of potassium has upon the system, especially where mercury has been employed pretty freely, is sometimes seen in the profuse ptyalism which it produces, and if the syphilis receives any benefit from the administration of iodide of potassium, I believe it is in those cases which have heretofore been treated with mercury and the iodide arouses the mercury to new action. You can remove mercury from the system by the use of iodide of potassium, but you can never remove syphilis by using it. At the same time we use iodide of potassium in order to get good results in the system, I almost always employ the iodide of iron, as you see in this case. The point is, as has been stated, to bring the system up to par. The usual formula which I employ consists in six drachms of the iodide of potassium, one ounce of syrup iodide of iron, and make a six or eight ounce mixture. When this man first came here he was exsanguineous, and had a hang-dog look, but now his face looks ruddy and his system is fast getting into the proper condition for the manufacture of good blood. His system is being brought up, and now if he injures himself in any way, proper reparative processes will at once be instituted. The plan which I adopt and recommend in the treatment of syphilis is as follows:—Take a case of genuine Hunterian chancre. I commence with the administration of iodide of mercury in one-half grain doses twice in twenty-four hours, combined with something, perhaps hyoscyamus or lactucarium, to prevent irritation of the mucous membrane of the intestinal canal. Continue this, in connection with a true diet, consisting of simple plain material and such as will produce healthy blood, embracing breadstuffs, eggs, milk, and meat twice a day, and, cutting off entirely tobacco and all alcoholic drinks, continue the doses until the feeling of hardness about the chancre is all gone. Then stop the remedy, and watch the patient. If the disease begins to come out in the system, manifesting itself by glandular enlargements, diseases of the skin, affections of the fauces, or any one of these evidences, which shows that the poison is still in the system, resume the mercury as before and continue it until the disease has again passed away. It will be necessary to watch these patients for a long time, at least for months, and perhaps for a couple of years or more.

KRAUT.—Prof. Kraut of the University of Gottingen died recently, aged 72.

Reports of Hospitals.

CHARITY HOSPITAL, N. Y.

NOTES OF PRACTICE AND PECULIARITIES IN TREATMENT.

PNEUMONIA.

THE plan of treatment for pneumonia which finds most favor, is that by quinine and carbonate of ammonia. The patients are given from the first about 15 grs. of quinine per day, in 5 gr. doses, and 6 grs. of carbonate of ammonia every two hours. The oil-silk jacket is looked upon favorably, especially when bronchitis is present. The quinine is given for its tonic and anti-cell producing effect, and the carbonate of ammonia, not so much to retain the fibrin in a fluid condition as for its stimulant effect.

Alimentation is to be carefully attended to, and the patients are to be well nourished. With this plan of treatment the report is that the patients do remarkably well.

PHTHISIS.

The general therapeutics in these cases are such as the profession are already familiar with. The only new remedy which has been employed for the relief of the night-sweats is the tr. of belladonna, given in ordinary doses, once or twice a day. This remedy has given very satisfactory results in all the cases in which it has been used.

For the purpose of subduing the fever, which in some cases becomes the most prominent symptom for treatment, Heim's pill has been used with excellent results:

℞. Pulv. herb. digitalis, ℈ss.
Pulv. rad. ipecac,
Pulv. opii puri, āā grs. v.
Extract helenii q. s. u. f. pill No. xx.
Consp. pulv. rad. ind. flor.
S. a pill three times daily.

To control the diarrhœa which sometimes appears, salicine has been used with better success than any other remedy which has been employed. It is given in ten-grain doses every four hours, either in the form of pill or powder, as most agreeable to the patient. Dr. Drake, House Physician, who introduced it into the hospital, has treated seven cases by the use of salicine, which had resisted every form of treatment which had been adopted, and cured every one of them. What is equally satisfactory is, they have remained cured. Salicine has therefore come to be one of the methods of treatment for chronic diarrhœa, whatever cause it may be dependent upon, or with whatever disease it may be associated. There are occasional cases which do not respond to this remedy; but in general, the results have been far more satisfactory than with the use of any other remedy.

SPASMODIC ASTHMA.

Nitrite of Amyl is considered very good, but the prescription ordinarily used is a drachm of Ct. Spts. of Ether with ten minims of Tr. Belladonna three times a day. This mixture may be continued for weeks, and many patients improve markedly under its influence.

HÆMOPTYSIS.

When the patient has a sudden attack, the local application of ice or cold sponges over the surface of the chest are mainly relied upon.

In these troublesome cases, where blood is expectorated, more or less in quantity, every two or three days, or once a week and so on, some of the patients have tr. ergot in half-drachm doses three times a day, and in some instances they have received marked benefit from the use of this remedy.

Inhalations of balsam of tolu and sesquichloride of iron. The quantity usually employed is

℞. Balsam tolu, ʒ j.
Sesquichloride of iron, ℥ ij.
Water, O j.

In that class of cases to which reference has been made, these inhalations allay the irritation, and act in a very beneficial manner.

SUB-ACUTE PLEURISY.

Tapping has rarely been resorted to here, for the reason that it has been rendered unnecessary by the method of treatment adopted in these cases. Blisters and diuretics, and with these tonics, constitute an essential adjuvant. The tonics most generally employed are quinine and iron. With this plan of treatment, paracentesis thoracis is an operation but rarely seen.

ACUTE ARTICULAR RHEUMATISM.

Opium in sufficient quantities to procure relief from pain, with the use of the "alkaline treatment," are the constitutional measures usually employed, and nitrate of potash and wine of colchicum-seeds is a favorite prescription, and in some cases seems to have the preference, when compared with the pure alkaline treatment. The topical applications for the joints are to immediately paint them with tr. iodine, cover with cotton, and over this oil-silk. Renew this every day. With all these elements at work thoroughly, the doctors expect to overcome all the acute symptoms at least, and in most cases the disease entirely, within four or five days.

BRIGHT'S DISEASE.

The plan of treatment for this formidable malady is the union of the diuretic and tonic plan.

The agents employed are the infusion of digitalis combined with bitartrate of potassa, and quinine and iron as tonics.

When œdema of the lower extremities is present, the hot-air bath is the common means employed for its removal, in addition to the constitutional measures already indicated.

Progress of Medical Science.

THE CAUSE OF COLLAPSE IN DIPHTHERIA.—Professor Mosler, of Greifswalde, has published two cases of sudden collapse during apparent recovery from diphtheria. They give a somewhat different theory for the cause of death than has been urged by Trousseau. In fact this complication is barely mentioned by the latter author. Niemeyer describes such cases as those whose general condition has not excited much apprehension, or, in fact, has been regarded as satisfactory until, without warning of any kind, they fell into a collapse. In other cases still, profound syncope has occurred a number of times, at last ending in death.

A great deal of discussion has taken place with regard to the implication of the nervous system in the pathological changes, but in many cases no lesion whatever could be discovered. Wagner was the first to call attention to the fact that in these cases there was usually some change in the muscular tissue of the heart.

In the two cases cited by Mosler collapse was sud-

den and unexpected, the first taking place on the fifteenth, and the second on the fifth day. In both of them the walls of the heart were found dilated, and the seat of fatty degeneration. The trabeculæ in each case were flattened down.

The author makes the practical deduction that this demonstrates how necessary it is to adopt a tonic and stimulant method in treating this disease.—*Archiv der Heilkunde*, 1873.

The Relation between Intestinal Hemorrhage in Typhoid Fever and Cold-water Affusions.—Wunderlich, of Leipsic, has published an interesting reply to the opponents of this mode of treatment, and makes special reference to 18 cases in which this complication occurred in his father's clinic, between the years 1868 and 1872. Of 253 cases, the whole number treated during that time by various methods, intestinal hemorrhage occurred in 18, or in 7.1 per cent. It occurred, moreover, in 16 out of 155 cases treated by cold water, or in a little over 10 per cent.

These apparently unfavorable statistics are believed to be exceptional and dependent on other causes than this particular method of treatment. For example, four of these cases occurred in the comparatively short space of time between the 27th of September, 1868, and the 14th of November of the same year. For the subsequent three years only two such cases occurred, while the remaining 12 fell between the 30th of June, 1871, and the 20th of April, 1872. He adds that it is well known how certain epidemics show a marked prominence of special symptoms. This was true in Algiers; for of two epidemics one exhibited intestinal hemorrhage in two per cent. of the cases, and the other in 28.6 per cent., and the treatment in both was identical. Further, if cold applications cause such hyperæmia, we should expect that the blood would escape when the vessels were under the greatest pressure. In the six cases already mentioned only three had hemorrhage that could in any way be ascribed to the bath, and then it occurred after a lapse of some hours, while in the other cases after fully half a day.

The following statistics of mortality from typhoid fever with enterorrhagia have been compiled for the time preceding the introduction of this treatment—the name of the observer in each case is added:—Reinhard, 47.4 per cent.; Griesinger, 31.2 per cent.; Gietl, 50 per cent.; Vienna Hosp. Reports, 50 per cent.; Murchison, 35 per cent.; Betke (Bremen), 42.9.

Now, on the other hand, the statistics show a far more favorable result for treatment, the mortality, according to recent returns, being only 11.1 per cent., and no one of these cases died in consequence of hemorrhage. Of the 16 cases to which allusion has been made, the author believes that the hydropathic treatment was a powerful factor in insuring a favorable issue.—*Archiv der Heilkunde*, vi., 1872.

New Views in regard to Chlorosis and Puerperal Endocarditis.—Virchow in a recent article opposes the common idea that chlorosis results from an imperfect formation of the blood elements, and thinks that it may be due to anomalies in the vascular system. In these cases, he says, the heart and large vessels are not as fully developed as they usually are in persons of good health. This condition he usually finds associated with either an imperfect or an excessive development of the sexual organs. Still, as this is not always the case in chlorotic persons, and as the manifestations of the disease may appear before puberty and continue through and after pregnancy, we must look elsewhere for an explanation of the cause of the trouble, and he accordingly inclines to the belief that chlorosis stands in intimate relation with the more constant and permanent abnormities of the vascular system. The arteries, in these cases, are small and have thin walls, and give off irregular branches; this is especially true of the intercostals. The inner coat of these vessels, too, has a curiously undulating or fenestrated appearance, and is inclined to fatty degeneration; the middle coat and the muscular tissue of the heart are less often affected. As to the mechanical effect of the diminished size of the heart and vessels, there may still be no disturbance of the circulation, provided the blood be also diminished in quantity; but if greater quantities be produced, aortic pressure will increase, and dilatation and hypertrophy of the heart will ensue. The pressure in the peripheral vessels may then become excessive, and this may account for the frequent occurrence in such persons of the hemorrhagic diathesis, purpura, metrorrhagia, and chronic ulcer of the stomach. This imperfect development of the vessels, or hypoplasia, as it may be called, is frequently associated with an endocarditis of the valves. The left auriculoventricular orifice is affected by preference, and less often the aortic valve. The instances of endocarditis that occur in puerperal women, and produce such severe and dangerous complications, are more frequent than has hitherto been supposed. In most cases we can discover coincident disease of the uterus or adjacent organs; but there are cases in which puerperal endocarditis exists, and where the generative organs are perfectly normal.

Formerly death in such cases was regarded as due to pyæmic metastases. It is true we have sometimes to do with the occurrence of an old endocarditis which may return during pregnancy or parturition. The post-mortem changes are hard to recognize in pure valvular endocarditis, for the surface of the valves appears intact; the morbid process consists in a thickening of the endocardium. At first there are no heart murmurs and no local symptoms. In a short time, however, there appear over the affected spot warty or polypoid clots of blood, or there are ulcers formed by the dissolution of the effete matter, and then emboli are found in the spleen, kidneys, retina, and choroid.

There is another kind of endocarditis that is associated with puerperal disease. In these forms there is really a diphtheritic membrane formed, and it seems to be situated on a previously diseased portion of the valve. The cause of this affection is obscure.—*Berl. Beitrag. zur Gynaekologie*, 1, 3.

A Cure for Diabetes Mellitus.—Professors Cantani and Primavera, of Naples, report the most extraordinary success in their treatment of this obstinate disease. Their statements are in brief as follows:

1. Their patients have all, with rare exceptions, recovered.

2. Stout persons have lost but little weight during the treatment, while spare ones have sometimes gained as much as twenty-five pounds.

3. Though the urine has become rich in urea and uric acid, the patients have never shown symptoms of gout or urinary calculi.

4. The treatment was also successful in arresting some instances of albuminuria that accompanied the disease.

5. The cure consists in an exclusive meat diet, and by this term fish is also included; further, at each meal is to be taken lactic acid ♏ij–iv in water ℥ vj. As a substitute for wine at dinner, alcohol ℥ ss. with water ℥ vj is given.

Alcohol and lactic acid are designed to replace the

saccharine and starchy elements of the food. To obtain a permanent cure it is necessary to persist in the treatment for several months after sugar has ceased in the urine. Then the patient may gradually return to a mixed diet.—*Allgemein. Med. Central. Zeitung*, 1873.

THE LYMPHATICS OF THE BRAIN DURING INCREASED ARTERIAL PRESSURE.—Gaethgens, of Dorpat, believes that sudden pressure in the vessels of the brain is followed by a corresponding escape of fluid from the perivascular spaces through the lymphatics. Taking horses for his experiments, he opened both the carotid and the large lymphatics of the neck. After observing the amount of lymph that was escaping through the lymphatics, he injected the carotid with some warmed and defibrinated blood under high pressure. In each experiment it was found that during and immediately after injecting the carotid there was a remarkable increase in the flow of lymph.

The suddenness of the increase would seem to indicate that it was not due to increased transudation from the vessels into the perivascular spaces, but rather to the mechanical pressure.

This may explain how force is distributed when for any reason the vessels are subjected to unusual tension. If the same force acts for a longer time it will naturally lead to œdema and compression of the brain.—*Allgemein. Med. Central. Zeitung, Feb.*, 1873.

STRYCHNIA AND ITS PHYSIOLOGICAL ANTAGONISTS.—Schroff has made some interesting observations in the Pharmacological Institute of Vienna, and his conclusions as to the antagonism between strychnia and its various supposed antidotes are somewhat different from those that have heretofore been reached.

In these experiments he employed an aqueous solution of the nitrate of strychnia, each cubic centimetre of water containing two milligrammes of the poison. He found that a single milligramme of strychnia used in this way was sufficient to kill a frog, while it required fifteen milligrammes to kill a rabbit.

Having administered poisonous doses to these animals, he tested the efficacy of such reputed antidotes as physostigma, bromide of potassium, aconitia, the methyl compounds of strychnia, and the hydrate of chloral.

It will be remembered that there are two recorded cases in which physostigma has been successfully used. In one of these cases Keyworth saved the life of a woman who had taken three grains of strychnia. He employed the tincture of the alkaloid in thirty-drop doses. In the second case, Newman, by giving one-sixth grain doses of the extract of Calabar bean, moderated spasms which were apparently due to strychnia.

The results of the experiments in these cases were formulated as follows:—

1. That the Calabar bean moderates the tetanic spasms, but

2. That it does not defer the fatal termination, in one case rather accelerating it.

The interest which attached to the alleged antagonism between strychnia and the bromide of potassium was due to the success reported by Gillespie and Hewlett.

The experiments in this case resulted negatively; in fact, death seemed sometimes to be hastened by the bromide.

In regard to the action of aconitia, it was found that whether large or small doses were given, the phenomena of strychnia poisoning were never entirely obscured. Entire absence of reflex action seemed to follow most rapidly when both alkaloids were administered simultaneously. In the larger doses death followed from aconite poisoning.

Woorara was also tested, and poisonous doses were given in one case before, in a second during, and in a third after, a poisonous dose of strychnia. In none of these cases, however, did the woorara arrest the tetanic spasms, but in one instance the characteristic actions of both poisons showed themselves side by side.

One experiment only was performed to test the methyl compounds of strychnia as antagonists of strychnia. The result was highly satisfactory. A poisonous dose of the methyl was followed by a non-poisonous one of strychnia, and the animal recovered in a few days.

The following observations were also made with regard to the hydrate of chloral:—

If strychnia be given to an animal during the deep narcotism of the hydrate, a poisonous dose of the former will be borne with impunity, but will not prevent a fatal termination, which will eventually take place through a gradual failing of the respiration.

Many of the statements now published by the author he wishes regarded as preliminary, but he hopes by further experiment to be able to establish them more satisfactorily.—*Med. Jahrbuecher*, iv., 1872.

CATARRHAL SALPINGITIS.—Prof. Carl Hennig, M.D. D., of Leipzig (*Am. Jour. of Obstetrics*), has an important paper on "Catarrh of the Fallopian Tubes —Catarrhal Salpingitis"—an affection very common, and, of the various catarrhs of the genital organs, occurs the most frequently. Whether, under ordinary circumstances, tubal secretion flows into the cavity of the uterus, he states, is still an undecided question. Having examined 103 subjects with reference to catarrh of the internal genital organs, he found that in 41 cases the mucous membrane of the tubes, 31 of the body of the uterus, 43 of the cervix uteri, and 27 of the vagina, was in the catarrhal condition. For the most part, both tubes are affected; the left is more often singly affected than the right. In 27 cases both were affected; in 10 the left, in 7 the right; among 86 tubes examined, 69 of the whole were catarrhally affected. In regard to complications of tubal catarrh, in 24 cases evidences of peritoneal inflammation were present, which in seven of them had not ceased; one case showed not only the results of previous peritonitis, but also an endocarditis, pneumonia of the right side, icterus and ecchymosis of the liver, chronic nephritis, and eczema of the skin. In six women, ascites was met with. Adhesion of the ovary to the diseased tube occurred eight times; to intestines, once; to the uterus, once. In connection with anomalies of the ovary it was found in 23 cases, etc. Tubal catarrh, as long as it does not produce a perforating ulcer, is not fatal. It is otherwise with the sympathetic and secondary catarrh.

The life of the prostitute, and probably the period of pregnancy, are the most productive fields for tubal catarrh; the puerperal state the least productive. Married women are less often exempt than all individuals past the menopause in the various social positions. Widows are less seldom spared than children. Chaste women are more subject to catarrh than the prostitutes, the young, and the married. In concluding, he considers it interesting, that of married women before the menopause, less than half, and after the same, more than half, are affected.

THROMBOSIS OF THE ARTERIES OF THE EXTREMITIES.—John A. Liddell, M.D., of New York (*Am. Jour. Med. Sciences*, Jan. 1873) has a lengthy article in which he

discusses, mainly from a clinical stand-point, thrombosis as it occurs in the systemic arteries, especially those which belong to the extremities.

By way of introduction, he asserts that the blood does spontaneously coagulate in the peripheral arteries during life, as he has shown that it not unfrequently does in the peripheral veins, or, in other words, systemic arterial thrombosis does take place. Thrombosis of the arteries of the extremities has been observed much more frequently in connection with the so-called spontaneous gangrene of the aged than with any other disorder. Two cases are reported which afford a good illustration of the relation which subsists between arterial thrombosis and senile gangrene. A case is reported, affording an illustration of another variety, namely, that in which the coagulation primarily occurs, not in the terminal branches, but in the main artery of the limb. A case related by Romberg describes a third variety, that of *secondary arterial* thrombosis.

In describing the clinical relations of thrombosis of the arteries of the extremities, he mentions, with cases, the following several diseases in connection with which it has been found to occur: Puerperal Gangrene; Rheumatic Gangrene; Ulceratvie Endocarditis; Asiatic Cholera; Pleuro-pneumonia; Typhus and other forms of continued fever; Constitutional Syphilis. Inflammation of the parts surrounding large arteries and veins may sometimes be attended with thrombosis of these vessels.

No period of life is exempt from the occurrence of thrombosis of the systemic arteries.

Ovariotomy.—J. Marion Sims, M.D., of New York, in a recent number of the *N. Y. Medical Journal*, has an extended paper in which he claims that the majority of the fatal cases of ovariotomy are caused by septicæmia. To substantiate his opinion he presents the records of thirty-nine fatal cases taken from the first 115 operations made by Mr. Spencer Wells; of these, the latter gentleman interpreted the causes of death as follows: Intestinal obstruction, 1; tetanus, 2; pyæmia, 2; heart-clot, 3; exhaustion, 7; peritonitis, 12; septicæmia, 7; not stated, 5. Total, 39. Dr. Sims makes the causes as, Tetanus, 2; pyæmia, 3; septicæmia, 34. Whenever in the progress of a case, after operation, there was a discharge of reddish serum beside the pedicle, he put it down as septicæmia. In every one of the author's seven post-mortem examinations, and in every one of Mr. Wells, twenty-six, there was a quantity of reddish serum, or grayish turbid serum, or fetid serum, or putrid serum, or acrimonious serum, in the peritoneal cavity; and in cases slowly dying of pyæmia, pyogenic reservoirs are found in the pelvic cavity. He thinks it is logical to infer that these pent-up fluids are the causes of the blood-poisoning that so uniformly and universally attends the fatal cases of ovariotomy. Dr. Sims gives Dr. Peaslee credit for the principle of intra-peritoneal medication which was originated by the latter, and only claims to be his coadjutor. But the rule that he would establish for exceptional cases, Dr. Sims would wish to make applicable to all alike; and instead of washing out the peritoneal cavity at the top, he proposes to open it at the bottom, as he did in 1855, and let the fluids run out spontaneously and continuously. The natural outlet of the peritoneal cavity is through the Douglas *cul-de-sac*. Dr. T. Parvin, of Indianapolis, Ind. (*Am. Practitioner*, Nov. 1872), in reviewing three cases of ovariotomy, is impressed wtth the value of a preliminary tapping in cases of ovarian dropsy when the tumor is large. The tumor by its immense size has seriously disturbed vital functions. Lessen its size, so that that interference may be temporarily at an end, and the patient may rally and recruit her forces. And again, it is less violence to remove a mass of ten or twenty pounds than one of forty, fifty, or sixty. Possibly or probably the patient's chances of recovery are increased in proportion as the size of the tumor is diminished. Finally, for the purpose of diagnosis, a preliminary tapping is of great value. As to the method of securing the pedicle, he believes, when the length is sufficient, there is nothing so simple, so easy, and so efficient as the clamp.

Thrombus of Left Ventricle, with Pulmonary Apoplexy and Rupture of Thoracic Duct.—W. W. Munson, M.D., Otisco, Onondago County, New York, relates the following case: C. E. B. Male, aged 18 years. Previous health good. I was called in the night of October 10, 1872, with report that patient had "difficulty of breathing." Arrived about 12 o'clock P. M. Found great dyspnœa with tumultuous action of heart, face livid, pupils dilated to a mere rim—not responsive to light, conscious. He had been suffering for a few days from a slight attack of indigestion, with vomiting and diarrhœa, which was readily controlled with bismuth and astringents.

Mother stated that at about 11 o'clock of the night in question, he called her with this complaint of "jerking in his breathing," and that he had been very restless during the previous day, going from couch to bed and back every few minutes.

After I had been in the house about fifteen minutes, dyspnœa suddenly increased, and immediately blood and contents of stomach gushed from mouth and nose with great force, and he was dead instantly, making but two violent efforts in as many breaths, as one dying of strangulation.

Made autopsy in presence of Dr. J. Kneeland of South Onondaga. Found large thrombus in right ventricle, firmly attached to tricuspid valve and its tendinous and muscular cords, extending into pulmonary artery an inch or so. Inferior cava, superior cava and its immediate branches firmly obstructed with coagula. A large rent was found in lower lobe of left lung, opening into a pleural sac, which contained four or five ounces of blood. Right pleural cavity also contained blood. Lungs otherwise healthy.

But the most interesting feature of the case is this: On opening abdominal cavity we found several ounces of a milky appearing fluid which, by separating stomach and transverse colon, could be seen oozing up from below. Stomach and bowels were carefully examined for perforation, but none was found, nor did either contain any such substance; both perfectly healthy. Then we thought there must be an abscess, but none was found. At last we discovered a large rupture of the thoracic duct, just behind the pancreas, probably produced in the violent efforts of the death agony—the left subclavian, along with the other branches of descending cava, being engorged, obstructing opening from thoracic duct.

No embolus was *found* in branches of left pulmonary artery to cause the laceration of lung; neither could we account for the hemorrhage into right pleura, probably produced, however, by rupture of some small thoracic veins which escaped detection.

Query: Is it possible that the efforts in suffocation produced by the thrombosis were sufficiently violent of themselves to cause so general a laceration of tissues which were not in any way degenerated by disease?

Bronzing of the Skin.—H. C. Hand, M.D., of St. Paul, Minn. (*N. W. Med. & Surg. Jour.*, Jan., 1873), publishes a singular case of intense bronzing of the

skin of the entire body arising during pregnancy. The patient was an unmarried Irish girl, æt. 21. She, having been thrust from her home in the North of Ireland, arrived in Philadelphia penniless and friendless. She was delivered of a full term and healthy fœtus. From the time of its first appearance the discoloration of the skin gradually increased in intensity and territory, until at the time of delivery it had invaded the whole body. In the course of months the anæmia and prostration vanished and the darkness of her skin gradually faded away. The author suggests that her grief was an active agent in producing the pigment changes of her skin, by modifying its nutrition through defective or faulty innervation. This query is raised: "When aided by the predisposing cause of gestation, why might not her skin turn dark from grief, as readily as the hair may turn white from grief or fear?"

Amputation at the Hip-joint.—A successful case of amputation at the hip-joint is related by A. E. Carothers, M.D., of Saltillo, Mexico, late Asst. Surg. U. S. Vols. (*Am. Jour. Med. Sciences*, Jan., 1873). The following are his closing remarks: Where gunshot fracture of the trochanters, neck or head of the femur is complicated by wound of the great vessels of the thigh, or where they are included in a slough of the wound causing secondary hemorrhage, it is the duty of the surgeon to give the patient the chance for life that lies in amputation at the hip-joint.

ARTICLES IN OUR EXCHANGES.

PRACTICAL MEDICINE AND PATHOLOGY.

Series of cases of organic heart-disease. Alfred Stille. *Northwestern Med. and Surg. Jour.*, April.

On diseases of the throat. Knight, F. I. *Boston Med. and Surg. Jour.*, April 3.

On the epidemic influenza. Various Authors. *Med. and Surg. Reporter*, April 5.

Extensive abscess of the abdominal cavity. Constantinides, P. C. *Canada Lancet*, April.

On thrombosis of the cerebral arteries. Lidell, John A. *Am. Jour. Med. Sciences*, April, 1873.

An inquiry into the nature of the yellow-fever poison, etc. Sternberg, George M. *Am. Jour. Med. Sciences*, April, 1873.

Typhoid fever, lesions and treatment. Rhett, Benjamin. *Charleston Med. Jour. and Review*, April.

Case of tubercular meningitis. Ross, George. *Canada Med. and Surg. Jour.*, April.

Pathology, causes, course and treatment of rheumatism. Whitmire, James S. *Chicago Med. Jour.*, April.

The character of phthisical hæmoptysis. Dutcher, A. P. *Cin. Med. News*, April.

Paresis of the cerebral arteries. Kennedy, Stiles. *Review of Medicine and Pharmacy*, April.

Functional disease of the heart. Davis, N. S. *Med. Examiner*, April 1.

The case of a patient with a history of syphilis, and a blow on the head, having died with phthisis. Carson, Wm. *The Clinic*, April 5.

Thermometry in cerebro-spinal meningitis. Rodenstein, C. F. *Archives Scientific and Practical Medicine*, March.

Plastic exudation within the pleura—dry pleurisy. Leaming, J. Rosebrugh. *Archives Scientific and Practical Medicine*, March.

Inhibitory arrest of the act of sneezing, and its therapeutical applications. Seguin, E. C. *Ibid.*

On a rare cause of mistake in testing urine for albumen by the ordinary processes. Brown-Séquard, C. E. *Ibid.*

Variola; observations during the last epidemic. Kersch, S. *Memorabilien*, 2, 1873.

Case of so-called Addison's disease. Zenoni, H. *Ibid.*

Aphasia and partial dementia Vogelsang, F. *Ibid.*

Treatment of fever by cold water introduced into the rectum. Kemperdick. *Berl. Kl. Woch.* 10, 1873.

SYPHILIS AND DERMATOLOGY.

Experiments on the action of different medicines on the hæmatopinus vituli (louse of calf). Murray, A. J., Detroit. *Detroit Review of Med. and Pharm.*, April.

Eczema genitale. Hyde, James N., Chicago. *The Med. Examiner*, April 1.

The therapeutics of diseases of the skin. Anderson. *The Med. News and Library*, April.

On the present state of the question of the unity or duality of syphilis. Bumstead, Freeman J. *Am. Jour. Med. Sciences*, April, 1873.

Acarodermatitis autumnalis. Southworth, J. W *Detroit Review of Med. and Pharmacy*, April.

Concurrent exanthemata. Coles, Walter. *St. Louis Med. and Surg. Jour.*, April.

Change in the hair and skin. Ferrell, H. V. *The Clinic*, April 5.

The local use of tar and its derivatives in the treatment of skin diseases. Bulkley, M. D. *Archives of Scientific and Practical Medicine*, March.

THERAPEUTICS.

Remedial action of chloral. Walker, James B. *Med. Archives*, April.

Bromide of potassium. With some remarks as to its use in cerebro-spinal meningitis and infantile diarrhœa. Alleyne, J. S. B. *Ibid.*

Pathologica. Therapeutic studies on catarrhal pneumonia. Geddings, J. F. M. *Charleston Med. Jour. and Review*, April.

Bromide of potassium in sick headache. Kinsman, D. N. *The Clinic*, April 12.

The muriate tincture of iron in epistaxis and hæmoptysis. Perrigo, James. *Canada Med. Record*, April.

On the use of alcoholic stimulants by nursing mothers. Bessey, Wm. E. *Canada Med. Record*, April.

Essay on aconites and aconitine. Patronillard, Chas. *The Pharmacist and Chem. Record*, March.

Blistering in rheumatism. Gleeson, J. K. P. *Med. and Surg. Reporter*, April 12.

Carbolic irritant. Lawrence, Geo. W. *Ibid.*

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The action of quinine. Steele, N. C. *Wash. Jour. Med. and Surgery*, March.

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Report on the U. S. Pharmacopœia. Squibb, E. R. *New York Med. Jour.*, April.

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Contribution to our knowledge of the physiological action of atropia. Wood, H. C., Jr. *Am. Jour. Med. Sciences*, April, 1873.

Method of using strychnia in the treatment of optic-nerve atrophy and allied nervous affections. Chisholm, Julian J. *Ibid.*

Galvanism in the treatment of strumous ulceration. Deering, Thos. W. *Ibid.*

DERMATOLOGY AND SYPHILOGRAPHY.

Psoriasis with nervous disturbance. Emminghaus, H. *Berl. Kl. Woch.*, 10, 1873.

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The influence of uræmic and alcoholic poisoning on testamentary capacity. Rogers, Stephen. *N. Y. Med. Jour.*, April.

Arsenical poisoning. Gallinger, J. H. *New England Med. Gazette*, April.

Sausage poisoning. VOGELSANG, F. *Memorabilien*, 2, 1873.

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Report on the progress of ophthalmology, 1872. JEFFRIES B. JOY, Boston. *Report of Am. Ophthalmological Soc.*

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Examination of eyes of the blind. HARLAN, GEO. C. *Ibid.*

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Annual report of the medical clinic in Tübingen for 1873. LIEBERMEISTER. *Med. Correspondenz-blatt.* 7, 1873.

Report of the Surgical Division of the National Hospital for 1871. MIDELFART. *Norsk Magazin for Lavgevidenskaben*, 3, 1873.

The New York Quarantine Establishment. BELL, A. N. *N. Y. Sanitarian*, April.

The importance of sanitary science, etc. AGNEW, C. R. *N. Y. Sanitarian*, April.

The influence of railroads on disease-prevalence. SWENEY, WM. W., Red Wing, Min. *Northwestern Med. and Surg. Jour.*, April.

The necessity of revaccination. *Sanitarian*, April.

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Exstrophia vesicæ c. fissura ossium pubis. BRAUN, E. *Hygeia*, 1, 1873.

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On the surgery of the nares, larynx, and trachea. COHEN, J. SOLIS. *Phil. Med. Times*, April 5 and 12.

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Fifty-eight lipomas in one subject. HARRIS, ROBERT P. *Am. Jour. Med. Sciences*, April.

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Croup: treatment by inhalations of lime. PARKER, W. W. *Virginia Clin. Record*, April.

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THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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

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SHALL WE HAVE ANOTHER AMERICAN MEDICAL ASSOCIATION?

THE present meeting of the American Medical Association in St. Louis invests the question of the practicability of reorganizing that body with much interest. For several years past there has been a feeling that this organization is very far from representing the profession of America, so far indeed that with few exceptions there is hardly a medical man in the country who is not thoroughly disgusted with its workings and heartily ashamed of the reputation it has earned. At one time to speak against any policy of the Association, or to criticise its doings, or to question its motives, was considered so heretical that it required all the moral courage which a firm conviction of being in the right gave to the critic. When we first took occasion to refer to its proceedings as being farcical, undignified and unworthy of the high aims of a body claiming to guard the best interests of our brotherhood, we recollect how much righteous indignation was uttered against us. Now, however, as the question has been taken up and discussed by many of the leading medical journals, all of whom agree that the Association as such has proved itself a failure, we feel that we have not written in vain; that we did not take the weaker side of this argument. We are now convinced that the time has come when the profession throughout the land are ready to entertain the question of a thorough reorganization of the society, and are willing to make an effort to give it that power and usefulness which should rightly belong to it. Many have gone so far as to give up all hopes of resuscitating it, and to propose a new organization in its stead. Although we believe that many radical and sweeping changes are necessary, we are willing to try the effect of restoratives a little while longer, believing that by this method there may be left a chance of lifting this so-called representative body from the disgraceful lethargy into which it has fallen.

We have always maintained that one of the great drawbacks to the Association has been the cheapness of its delegateship. So cheap has it of late become that it goes a begging. It has not been a question whether or not any one could go, but whether they would go. The consequence has been that very few of the solid representative men ever attend any of the meetings, and the important questions which may come up, and which have such an immense influence upon the good name of medicine, are left to be decided by incompetent upstarts and irresponsible bunglers. As we have so often said before, let there be fewer delegates, let there be the most stringent rules providing for their election, and let it be considered an honor to be elected. The suggestions of Dr. PROUT, of Brooklyn, which we publish in another column, are deserving of consideration in this connection. We commend them to the attention of all interested in the question of creditable delegateship. Although his method is far from being perfect, it presents many striking points of practicability. We can at least seize upon it as a starting-point. We care not how the question of delegateship is settled provided that we attain the results so anxiously, so imperatively desired.

We have also shown on previous occasions why newspaper reporters should be excluded, and why the suggestion of Dr. DAVIS, of Chicago, that the Association print its own proceedings, is a good one (MEDICAL RECORD, vol. viii., p. 85). We trust that the Association may act accordingly.

Another point to which we wish to call attention, and one which it is of the greatest importance to consider, is the necessity of having a large and carefully selected Committee of Ethics. Every year we have one or more test questions sprung upon the Association. As a rule only a few interested parties are prepared to discuss them, and we have an exhibition of the disgraceful scenes which have of late made the Association famous as an undignified, quarrelsome and stultified body. Now if all doubtful points, all important ethical questions, could be left entirely to this committee, composed, as it should be, of our best men, men whose opinion the whole profession respect, they could in a majority of instances be disposed of at once. If this committee cannot be unanimous in the expression of their views, let them make a majority and minority report, so that the Association can see the true issues at stake and be prepared to vote accordingly. This, it strikes us, is one way to insure that careful, impartial, and thorough examination into all "the weightier matters of the law" which their great importance to the present and future welfare of the profession demands.

Among all who have written on the subject during the past few months, no one has come so near to our

own views as Dr. Gross, of Philadelphia. In a letter to the *Medical Times* (April 5) he submits a plan of reorganization that is substantially a modification of the plan we propose. Dr. Gross, who is one of the oldest members of the Association, and who has given, as he states, "anxious deliberation" to the subject, accords with us in these three propositions:—

1. That the Association must reorganize or disband. 2. That ethical questions and miscellaneous business of all kinds should, so far as possible, be kept out of the public meetings of the Association. 3. That the membership should be somewhat restricted.

In regard to the details of the method of correcting these two evils we differ, but our general objects are the same, and the plans are not so far apart that they cannot be harmonized. Dr. Gross proposes the appointment of a medical council of ten members, residing at or near the place of meeting, to whom shall be referred all questions of ethics and other miscellaneous business, and their decision shall be final. We agree with this proposition, but the number of members of the council is too small.

A council sufficiently large, and composed of representatives from all parts of the country, would represent the profession of the *whole* country. They could meet a day or two before the Association meets, hold private meetings daily during the session, and on the last day, perhaps, bring in their reports. It is not probable that all the members of a council thus constituted would ever meet, but out of thirty or more members there would be at least a majority. Dr. Gross must himself see that a body of ten men in St. Louis are not competent to decide the destinies of an Association composed of physicians from all parts of the country. There is no necessity for quarterly meetings, as he suggests. Let them correspond by circular during the year, and when they come together their labors will be comparatively easy.

On this subject we are not theorizing; the plan we propose is a practical one; it has been and is carried out in many of our smaller societies, and with success, and this made their sessions most satisfactory. Dr. Gross further proposes to have the Association admit members only through the State societies. We believe that it would be more practicable and every way better to allow the county and other societies to send delegates as heretofore, excluding medical colleges, hospitals, and charitable institutions of every kind. The advantage of this arrangement would be, that the county and other societies, which are really of greater importance to the well-being of the profession than large organizations like the American Medical Association or State societies, will be better sustained, and the members will labor in them and for them in order that they may deserve and receive the honor of delegateship.

As an experiment the transactions have proved a failure not only in a scientific but in a pecuniary way, and unless we can make some change for the better in both respects we are in favor of confining their utility to the mere publication of the minutes, leaving the valuable papers to be disposed of as promptly as possible in the different medical journals of the country. By such means authors can come before large audiences, and their ideas can become the property of the profession at least within the year in which the pretentious and expensive volume of transactions is expected.

We do not, however, pretend to speak of all the changes necessary to be made in the organization of the Association to place it in the position which it should hold, but only desire to call attention at this time to one or two which, it strikes us, are of sufficient importance to engage the attention of the Association at its next meeting. Doubtless other suggestions equally good will be advanced by others, and if they are considered more practical, more comprehensive, and more salutary in their general influence upon the profession, we hope that they will receive every consideration. We are not ambitious to see any particular theories of our own adopted, our sole aim in entering the discussion being to redeem the Association and cause it to reflect the sentiments of the advanced professional mind of the present. Let us make a determined and conscientious effort to bring about such a result, and if this be impossible, we are then willing to accept the ultimatum of the demise of the Association, and at the same time congratulate the profession that it has freed itself from an incubus which has been weighing down its very life for the past ten years.

In conclusion, let us hope that the meeting at St. Louis will be signalized by the incorporation of all the changes in the organization which shall insure for it the countenance and respect of the entire American profession. We believe that the fate of the Association hangs on the meeting at St. Louis. Will its founders and friends be equal to the emergency?

THE MEDICAL AND SURGICAL HISTORY OF THE WAR OF THE REBELLION.

We repeat the recommendation made in the previous number, that the American Medical Association petition Congress for an appropriation to publish an edition of this great work, large enough to place a copy in the hands of every medical officer and private physician who has served during the late war, and also to furnish copies for sale at cost. In addition, let a vote of thanks be passed to Congress for what it has already done, and also to Surgeon-General J. K. Barnes, U. S. A., and the accomplished and scholarly compilers and editors. The profession, as a body, cannot express itself too emphatically on these points.

THE MEDICAL HEALTH COMMISSIONERS.

If the new health department is actually created, there will be but one medical gentleman to be ap-

pointed as Health Commissioner. It is a matter of a good deal of importance that he shall be a thoroughly representative man. The Health Officer of the port, whose appointment as the other medical member is provided for by the act, will receive the indorsement of the profession. Let us hope that an equally responsible one will be found as his associate. The means to such an end will, in our opinion, be the retirement from public life of the present Health Commissioners, neither of whom have met the expectations of their brethren. As to the chiefs of the new bureaux, nothing better can be done than to have the old ones reappointed. This would be the most substantial tribute to their praiseworthy endeavors to discharge the grave responsibilities of their respective offices.

THE SANITARY SUPERINTENDENT OF THE BOARD OF EDUCATION.

We are pleased to note that Dr. R. J. O'Sullivan is again a candidate for the position of Sanitary Superintendent of the Board of Education. He is a gentleman eminently fitted for the position, having for many years past given close attention to sanitary affairs relating to the common-school system. The indorsement of the medical profession as represented by the presidents of the different medical societies, and other prominent physicians, is well merited, and should command the serious attention of the appointing power.

PHYSICIANS IN PUBLIC OFFICES.

With one or two exceptions, every one of the newly created school districts is represented by a member of the medical profession. This is as it should be, and proves that the profession is beginning to take an interest in the management of public affairs, which as representatives of an educated class they should have done long ago.

THE PROSPECTIVE HEALTH DEPARTMENT.

The new charter creates a Health Department composed of four commissioners, two lay and two medical. The former consists of the President of the Board of Police, and a layman who is to be President of the Board; the latter of the Health Officer and another medical gentleman. The bureaux to be continued are those of registration and sanitary inspection, as before. It is expressly provided that a medical man shall not be president. Why the bare possibility of a physician being chosen to such an office should have prompted our lawgivers to offer the gratuitous insult to our profession, of enacting that under no circumstances should such a thing occur, does not appear.

If the charter receives the approval of the Governor (which at the time of our going to press it has not), we shall have more to say concerning some of its provisions.

Reviews and Notices of Books.

THE PATHOLOGY, DIAGNOSIS AND TREATMENT OF DISEASES OF WOMEN, INCLUDING THE DIAGNOSIS OF PREGNANCY. By GRAILLY HEWITT, M.D., Lond., F. R.C.P., Prof. Midwifery and Diseases of Women, University College, and Obstetric Physician to the Hospital. &c. &c. Second American from the Third London edition; revised and enlarged with One Hundred and Thirty-two Illustrations. Octavo, pp. 741. Philadelphia, Lindsay & Blakiston. December, 1872.

AFTER a fitting dedication to Sir Charles Locke, the first sentence of the preface reads: "This new edition of my Treatise on the Diseases of Women is substantially a new work." We desire to confirm this statement, and to add that it is a very great improvement upon all previous editions.

The experience of the author for the last five or six years has led him to become a radical and earnest votary of the "Mechanical System of Uterine Pathology." Throughout this large volume this is the controlling idea. Mechanical displacement of the uterus in its three forms of Flexion, Version, and Descent, is in his mind the key to all or almost all the abnormalities of the nutritive, menstrual, secretory, sanguimotor, and nervous functions. In order not to misrepresent the author we will borrow his own statements upon the subject: "Patients suffering from symptoms referable to the uterus are almost universally found to be affected with flexions or alterations in the shape of the uterus of easily recognized character, but varying in degree."

"The change in the form and shape of the uterus is frequently brought about in consequence of the tissues of the uterus being previously in a state of unusual softness, or what may be often correctly designated as chronic inflammation.

"The flexion once produced is not only liable to perpetuate itself, but continue to act incessantly as the cause of the chronic inflammation present.

"Logically and practically there are good reasons for placing the flexions first in the order of sequence. Admitting the powerful predisposition to flexion produced by a soft condition of the uterus, that softness is not always of the nature of inflammation, for flexion, not uncommonly, as after parturition, may be brought about by over-straining; the uterus being simply softer and larger than usual. Accidents or over-exertions frequently give rise to flexions in the non-gravid state, without any decided evidence of previous uterine inflammation.

"It is not intended to be inferred that all uterine pathology involves is a study of flexions, their relations to inflammation, and *vice versâ*. The uterus is liable to other pathological processes having no relation of a tangible character to either flexion or inflammation, *e.g.*, cancer, fibroid tumors, &c. But regarding the large majority of actual cases it is nevertheless true that these flexions and consequent inflammations have a very preponderating influence."

In support of these propositions he reviews the entire uterine practice of the University College Hospital, as observed and directed by himself during the last four years.

Of 1,205 cases upon the books, 491 were those of disease of the external generative organs, the breasts, the ovaries, and conditions dependent upon pregnancy; leaving 714 cases properly classed as uterine. In 90 of these no examination was obtained; the remaining 624 were the more severe cases, and in them diag-

nosis was definitely made by physical examinations, as follows: Ante-flexion, 184; Retro-flexion, 112; Prolapsus, 81 (or 377 cases of displacement in the total of 624); Fibroid tumors and polypi, 96; cancer, 54!!; Pelvic cellulitis, 32; or 182 cases of organic nature; leaving 65 to distribute among Menorrhagia, Amenorrhœa, Hæmatocele, Hypertrophy of Cervix, Leucorrhœa, Climacteric disorders, &c. &c.

Reviewing these statistics, we remark: 1st. That, accepting the author's diagnosis, we think his conclusion of the preponderating influence of displacements is fully sustained by them. 2d. That other authors with minds preoccupied with other ideas would probably have classed these cases very differently; *e.g.*, to J. Henry Bennett they would mostly have been inflammation and hypertrophy, to Chapman (latest of American authors) they would mostly have been congestion.

3d. That in our opinion Dr. Hewitt, ably, and in the main justly, goes behind these secondary and derived conditions to the prime cause of the morbid phenomena in displacements—probably erring, however, in not allowing congestion to precede displacement in the order of time as often as the facts warrant.

4th. We are disposed to believe that in estimating ante-flexions and ante-versions sufficient allowance is not made for the normal varieties of the forward inclination of the uterus.

Thus, in the girl before puberty, the uterus is constantly ante-verted—and during menstrual life, if the longitudinal axis of the body of the uterus being produced upward should issue in the median line, and not more than 2½ inches below the umbilicus, we should not consider that anterior displacement existed. We should not accept Dr. Hewitt's opinion, that when the intra-vaginal portion occupies the axis of the superior strait of the pelvis, and the body of the uterus can be felt above the anterior vaginal cul-de-sac, morbid anteflexion exists.

Conversely, we should not describe as morbid any retroflexion in which the axis of the body of the uterus did not fall behind the axis of the trunk—unless there were decided symptoms of discomfort or disorder of function.

5th. The proportion of cases of cancer (54 in 1,205) seems to us very large—no parallel for it existing in our experience or observation.

On pages 35 and 36 we have copied from Dr. Farre three very instructive plates, the study of which will do much towards correcting ideas of uterine pathology in the minds of students; and on page 37 a statement of great importance, more clearly made by Dr. Hewitt than by any other author with whom we are familiar, viz.: that the primary effect of congestion upon the tissues of the uterus is to cause *softening* and *increased pliability*. This is the condition in which flexions very commonly are acquired. Endometritis as a separate and distinct phenomenon Dr. Hewitt regards as rare in the extreme, but very common as the result of any condition which obstructs the cervical outlet, such as flexions, hypertrophic elongations of the cervix, and such softening of the cervix as allows its tube to collapse—also any obstructive adventitious growths, as polypus, fibroids, epithelioma, cancer, &c., &c.

In common with most modern authors Hewitt lays little stress on "Ulcerations of the Os," regarding the condition as generally but a symptom, and the term as very commonly misapplied. Acute inflammation of the uterus from other than traumatic causes he considers extremely rare. Chronic congestions and so-called chronic inflammation he considers as best managed by constitutional treatment, local depletion and the sparing use of milder caustics, but believes that many of the cases depend upon flexions and are best treated by removal of the cause.

Chaps. iv. and v. are occupied with the methods of exploring the Pelvis and its Viscera. The teaching is sufficient and sound but presents nothing new. Chap. vi., pp. 146–192, treats of the diagnosis of Pregnancy. It is comprehensive and well written, and embraces some points not often adverted to.

Chaps. viii.–xiv. treat of Flexions, Prolapse and Inversion. The subjects are illustrated by admirable plates, which seem to us more satisfactory than those usually employed. They teach us how Congestion, Chronic Inflammation, Endometritis, Hypertrophy, Dysmenorrhœa, Amenorrhœa, Metrorrhagia and Abortion, with their whole train of subjective symptoms, may and often do depend upon these mechanical causes.

The chapter on Inversion is not so full as the subject warrants, and does not detail many of the mechanical expedients found useful in reinversion, such as the dimpling of the fundus, elastic pressure, incision of the cervix, the repositor of Dr. White, or the exceptional intra-abdominal dilatation of Prof. Thomas.

In repositing the flexed uterus Hewitt appears to employ only the ordinary Simpson's sound, which for such uses has, with us, long been superseded by Sims' Repositor or the still more beautiful articulated instrument devised by Emmet.

In the general treatment of flexions he assigns much importance to the dilatation of the cervical canal, asserting that moderate anteflexions are often cured by this means alone. For the retention of the rectified uterus he employs intra-vaginal pessaries, occasionally the intra-uterine stem, which he mounts upon his ordinary ring-pessary. The instrument which he commonly employs is known among us by his name. It is a copper wire ring covered with gutta-percha, varying in diameter from 2½ to 4½ inches, and so malleable that it may be put into any shape. The shape employed for retroversion is the elongated and double-curved oval familiar to us in "Hodges' Closed Lever" and the "Albert Smith."

Dr. Hewitt's instrument is little used among us, the ring of plain block-tin being preferred on account of its greater cleanliness and permanence, and the hard rubber instrument chosen in preference to either on account of lightness, cleanliness and comparative freedom from the danger of producing ulceration of the vagina. For anteversion he bends a ring of large diameter into a shape to which he gives the name of the Cradle Pessary. The peculiarity being that while one end of the instrument occupies the posterior cul-de-sac, two shoulders rise up to occupy and extend the exterior cul-de-sac, while the remainder of the instrument follows down the anterior wall of the vagina and finds its fulcrum on the inner surface of the symphysis.

The subject of Pessaries is a very important one. While there are still some who decry their use, we are sure that such are neither the majority nor the best informed portion of the profession.

In our observation more signal and more frequent advantage follows their use than any other single proceeding in gynæcological therapeutics. Such evidently is Dr. Hewitt's opinion. The great variety of instruments, some of them of the most absurd character, and the constant crop of new forms which are yearly added to the list, attest the ingenuity and the imperfect success of the profession in this field.

The section upon the natural supports of the uterus and the forces which antagonize displacement is a very full and just discussion of the subject. The operation for removing the vagina, as done by Sims, Emmet and Thomas, is discussed without conclusion as to the final

value of the proceeding, a matter upon which, we believe, the projectors are not now sanguine. Amenorrhœa, Dysmenorrhœa, Meno- and Metrorrhagia are fully and fairly discussed, but the essay upon Chlorosis is not up to the mark of recent studies of that subject. The chapter on nervous disorders referable to the uterus is excellent; of course he finds that flexions are the most frequent occasion, and even asserts that the condition which the classic treatise of Gooch on Irritable Uterus illustrates, is pretty uniformly flexion with its attendant congestion. Hypertrophy, atrophy and the undeveloped uterus are discussed at length, but the author does not commit himself upon the vexed question whether there is ever an increase of tissue in the non-parturient uterus. Vaginal discharges, Hæmatocele, Cellulitis, cancer are critically studied.

Ovarian tumors occupy a considerable portion of the volume, but the abundant and exhaustive treatises of Wells, Peaslee and Atlee occupy this ground so much more fully that no one would think of studying them only in a systematic work upon diseases of women. In the account of the operation we notice what is either a grave mistake or a misprint in the direction that a temperature of 60° should be maintained in the room during the operation. We are not aware that the clamps invented by Dr. Hewitt have been much used by others. The objection to them would seem to be that they involve too much stitching of the pedicle. In common with other operators Dr. H. prefers the clamp where the length of the pedicle permits its use. Diseases of the bladder of the external generative organs and vesico-vaginal fistula occupy the remainder of the book. Dr. H. does not recognize, as our American specialists do, the harmlessness and the great advantage of incisions from the vagina into the bladder for the cure of calculus, cystitis, etc. He also seems to be unacquainted with the value of the electro-caustic methods of treatment, now so highly appreciated among us.

The style of our author is not free from ambiguities and repetitions. The book is larger than it need have been, but in its arrangement as well as in its teaching it is a great improvement upon the previous edition, and is, as a whole, equal in value to any of the recent systematic treatises on this subject. As we have before said, the plates are unusually instructive and valuable, and the general appearance of the book is creditable to the publishers. Future editions will undoubtedly appear and will command the attention due to the excellent opportunities, the diligence, the acumen, and the candor of the author.

ON THE FUNCTIONAL DISEASES OF THE RENAL, URINARY, AND REPRODUCTIVE ORGANS, with a general review of Urinary Pathology. By D. CAMPBELL BLACK, M.D., L.R.C.S., Edin., Member of the General Council of the University of Glasgow, Author of "Observations on Therapeutics and Disease;" "On Certain Points in the Pathology and Treatment of Gonorrhœa;" "On Syphilitic and Phagedænic Ulceration," etc., etc. Philadelphia: Lindsay & Blakiston, 1872.

IT is to be regretted that the author has not given more space to the first three chapters of this most excellent little work. As it is, they contain a complete summary of the most advanced views on "The conditions that affect the secretion of urine, with special reference to suppression;" "Retention of Urine, its Varieties, Causes, and Treatment," and "Irritable Bladder and Strangury."

The remaining chapters embrace the entire subject of spermatorrhœa and its accompanying disorders. The disinclination of professional men to give their attention to functional diseases of the male generative organs is deplored, and, on the other hand, their too exhaustive consideration of the corresponding diseases of the female is pointed out.

The arguments adduced in favor of sexual intercourse as a physical as well as a psychical necessity are strong and incisive, and the propositions of the moralists in regard to the beneficial effects of the act when *licensed*, and, *per contra*, its baleful influences when *non-licensed*, are aptly met and ably overthrown. Says the author: "Patients who are tormented with nocturnal emissions, and cannot marry, are advised, forsooth, to diminish secretion. Go to the raging sea and say, 'Be still!' . . . . . As well tell a man with jaundice to diminish his biliary secretion, or the unfortunate victim of diabetes to arrest the diuresis which constitutes a notable feature of his disease."

The term Spermatorrhœa is objected to in the following language: "I would suggest that the term Spermatorrhœa be at once and forever expunged from medical literature. Beside being a misnomer, it has an abominable ring. Spermorrhagia more aptly expresses the meaning of the term which should be employed."

In the concluding chapter non-specific urethral discharges and their differential diagnosis are discussed, and several instructive cases are related.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, Jan. 22, 1873.

DR. ERSKINE MASON, PRESIDENT, in the Chair.

TUMOR OF BRAIN.

DR. FINNEL exhibited a specimen of tumor of the brain embedded in the substance of the left middle lobe, and read the following history prepared by Dr. Matthew C. O'Connor:

Thomas Lynch, 35 years of age—born in Ireland—railroad laborer by occupation—married. This patient enjoyed good health until five months previous to admission to St. Vincent's Hospital, when he commenced to have constant headache, which he attributed to exposure to sun during the summer, his work as railroad laborer requiring him to be a great deal exposed. About three weeks afterwards the headache became more severe, quite suddenly, and it continued very severe since that time. His eyesight began to fail soon after this. He would vomit frequently, during the week previous to admission, almost every day. His smell began to be affected: shortly after he noticed his sight failing. Two months before admission had to take to bed. Denied explicitly ever having any venereal trouble.

He was admitted to St. Vincent's on November 1st. On admission he gave the above history. The pain he described as more severe over left side of head, and particularly so at occiput. His appetite was impaired and bowels costive. Pupils dilated, left slightly more than right. Pulse 60.

Next day after admission his pulse was found to be 45 and full. About two weeks after admission his eyesight failed completely. He would lie in bed with his eyes shut, and would only open them when told, the pupils not responding to light, then would quickly close them.

He vomited almost every time he took food, until about two weeks before death, when it ceased.

He had occasionally slight delirium, more marked at night. He did not sleep well, but took short dozes. Bowels were always constipated, requiring occasional injections.

He had no hemiplegia nor paralysis of facial muscles, except about two days before death, when paralysis of left orbicularis palpebrarum was noticed. Hearing unaffected.

His pulse at each observation was found invariably to be more frequent and weaker than at the preceding, until December 12th, two days before death, when it reached 150. At this time he gradually became comatose, with stertorous breathing, and died on December 14th. He was treated with iodide of potassium.

Post-mortem five hours after death. Body somewhat emaciated. Cranium alone opened. Pacchionian depressions well marked. Dura mater normal.

The specimen was, on motion, referred to the Committee on Microscopy.

Dr. Briddon remarked that it was not uncommon for cerebral tumors of slow growth to be unaccompanied by paralysis of the motor nerves. He had on a previous occasion presented a cancer growing from the base of the skull in which the larger lobe of the left hemisphere was involved. In that case sight was destroyed five years before death, smell two years, and taste for a much shorter period. There was no paralysis until immediately before death, when compression took place from the inflammatory action around the tumor.

MULBERRY CALCULUS LITHOTRITY SUPPLEMENTED BY LITHOTOMY.

Dr. Briddon next exhibited calculi removed by the operations of lithotrity and of lithotomy. The following was the history of the specimens.

The patient, a Baptist minister, aged 67 years and eight months, was referred to me in October, 1872, by Prof. Charles A. Budd. He had been suffering from symptoms referred to his bladder for the period of six or seven years, such symptoms consisting in the occasional frequent desire to urinate. During the last year his sufferings have been more permanent and pronounced, and at the time of his coming under observation he had to empty his bladder every two hours during the day, but was not much disturbed during the night; considerable pain during and after the act. This pain was in the organ involved, and in the glans. Urine was sp. gr. 1020. React. acid, and it contained neither albumen nor casts. He had no enlargement of the prostate, but for some reason, which I could not at the time explain, I made two careful explorations before I was able to satisfy myself of the presence of stone. October 15th, in the presence of Dr. John Howe, I introduced a lithotrite, and in the reversed oblique position I succeeded in closing the blades on a calculus less than an inch in diameter. Found on closing the blades it was not sensible of fracture, but as the instrument had been two or three minutes in the bladder I removed it, and there was a very small fragment of concretion adhering to the blades.

This operation, though conducted with the greatest care and gentleness, was followed by rigors and profuse perspirations.

October 22d introduced lithotrite; searched very carefully through all the positions of Civiale, but could not even detect the stone; this operation was followed by a succession of rigors and perspirations, and the patient was very weak and shaky for a week.

The difficulty and uncertainty of finding the calculus; the increasing irritability of the bladder, and the tendency to rigors, determined me to substitute lithotomy for crushing; and the operation was done on the 7th of January, 1873, in the presence of Profs. Budd, Mason, and others, and the stone was removed without difficulty worthy of note. After its extraction I searched the cavity for pouch or diverticula, to account for the difficulty I had frequently experienced in detecting the stone when exploring with sound or lithotrite. The bladder was not sacculated, it was unusually large, and its thickened lining membrane in large voluminous folds, sheltered behind which I could easily conceive it possible for a small concretion to elude the most careful manipulations.

The calculus was composed of oxalate of lime, incrusted with a layer of phosphates more than a quarter of an inch thick, the whole weighing ninety-nine grains.

In the afternoon of the day upon which the operation was performed the patient had one severe and several smaller rigors; he was ordered five-grain doses of the sulphate of quinine in conjunction with morphia. On the following day was in good condition, and his subsequent recovery was uninterrupted by accident of any kind.

CURIOUS CASE OF ENGORGEMENT OF THYROID BODY.

Dr. Delafield presented a specimen taken from a patient with the following history:

A gentleman, æt. 52, had always enjoyed good health, and was not conscious of anything abnormal about himself, except that he had for 20 years a small goitre on the right side of his neck. It had never given him any trouble, and it was a thing to which he had not paid any special attention. On the 22d of June, while eating his dinner, he suddenly, without apparent cause, choked over a piece of meat. From that day forth until the time of his death he was never able to eat any solids. There was no further change from the 22d of June until the 3d of October, when he noticed that the goitre was becoming enlarged, and at the same time was beginning to be painful. This condition continued for two days, when also without cause he was attacked with acute suppurative inflammation of both eyes. For this trouble the patient sought relief in the Eye Infirmary, where he was under the care of Dr. Althof. The disease ran a rapid course, both corneæ sloughed, and the contents of the eyes were discharged. He was then transferred to the Roosevelt Hospital, on the 29th of October. It was then noticed that the tumor on the right side of the neck was decreasing, and at the same time there was less difficulty in swallowing, although the patient was still unable to swallow solid food. On the 17th of November the tumor seemed to have disappeared. The difficulty in swallowing, however, remained about the same. With these symptoms he had occasional vomiting. He grew weaker and weaker, and a few days before his death he developed symptoms of gangrene of the lung, and died January 9. When the patient was admitted to the Eye Infirmary the principal attention was directed to his eyes; when admitted to the Roosevelt Hospital the principal attention was directed to the tumor in his neck, but further than this his case was not inquired into as particularly as it might have been. Dr. Delafield's care of the case ceased just when the tumor was commencing to decrease.

At the autopsy the brain was found normal. The eyes were found reduced to stumps. The ophthalmic arteries and veins, and the larger veins on the cranium connected with these, were examined with considerable

care, but nothing was found to account for the curious suppurative inflammation attacking both eyes. The right lung was found the seat of gangrene in a portion of its upper lobe the size of a hen's egg, and around this the lung was hepatized. There were also one or two small spots of gangrene in the lower lobe of the same lung. The heart, otherwise normal in appearance, was much reduced in size, evidently owing to the severity and the long continuance of his disease. The liver, kidneys, spleen, and intestines presented nothing abnormal.

On examining the neck the thyroid gland on the left side was enlarged, and extended down below the clavicle. On the right side where the tumor had existed the thyroid gland was rather small, and in the soft tissues surrounding it there were found some thin layers of yellow material, presumably dry pus. The wall of the œsophagus opposite the bifurcation of the trachea was destroyed for the space of an inch and a half long, embracing pretty nearly the entire circumference of the tube. It was destroyed by an ulceration which has opened into both bronchial tubes. The edges are ragged and very little thickened. On minute examination it was found that there was some infiltration in the neighborhood—in a word, that the ulcer was cancerous in character.

The trachea presented nothing abnormal until the bifurcation was reached, when an opening was found in both bronchi.

The autopsy only threw light upon one symptom, that is, the difficulty of swallowing, due to the tumor, which in its turn was occasioned by inflammatory processes.

EXCISION OE ELBOW—EXPEDIENCY OF TREPHINING OLECRANON.

Dr. Sayre presented a specimen of excised elbow-joint removed by operation for suppurative disease of the part, of eighteen months' standing, the result of an injury. The case made a very rapid recovery. He desired to call attention to the condition of the olecranon, illustrating by its numerous perforations. Nature's effort to discharge the contents of the joint. The question occurred to him whether it would not be well to imitate nature in this regard by trephining the olecranon.

Dr. Briddon asked if, in such an operation, there was not more danger from bony anchylosis than if a clean exsection were made.

Dr. Sayre remarked that the operation would be of course an experiment, but his recent successes in boring into the ankle would encourage him to do the same thing with the elbow when an opportunity should offer.

MORBUS COXARIUS—EXSECTION, ETC.

He also exhibited a head of femur, &c., removed, four weeks before, from a boy nine years of age, who had morbus coxarius for three years. The patient was removed from the wire-breeches the Sunday previous. At the time of making the report the patient was walking about on crutches.

Another similar specimen was exhibited, removed from a patient that afternoon at Bellevue Hospital. Said patient was a boy aged five years, who had suffered from hip-disease for two years, the result of a fall. The head and neck of the femur were entirely destroyed. The trochanter major presented a large carious abscess, which was opened, giving exit to the matter. The acetabulum was perforated. At the bottom of a sinuous tract, on the external aspect of the thigh, was a small spiculum of bone which was discovered while attempting to evacuate the said sinus of its contents.

He remarked, in conclusion, that this was his forty-first case. Of this number he had lost but eight—seven in the first twenty, and but one in the last twenty.

The Society then went into Executive Session.

Stated Meeting, February 12, 1873.

Dr. Erskine Mason, President, in the Chair.

MISCELLANEOUS SPECIMENS.

Dr. Lewis A. Sayre presented to the Society the patient from whom he removed the first and about half of the second phalanx of the thumb (1¼ inch in all) for necrosis following a neglected felon. The man had recovered with his thumb but little shortened, and with an artificial joint. The voluntary movements of the last phalanx were nearly as good as on the sound side.

EXSECTION OF ELBOW, ETC.

At the same time the before-mentioned specimens were exhibited he showed also the fragments of bone taken from an elbow which he had exsected. He could now report that, six weeks after the operation, the wounds had completely healed, and that the voluntary movements were now almost perfect.

Dr. Sayre next exhibited a great toe which had been removed from a gentleman who had suffered for the past eighteen months with suppuration of the tarso-phalangeal joint, caused by dancing with a tight boot. Abscesses had formed and eight fragments of necrosed bone had been discharged. The Doctor said he would have undertaken to form a false joint, as in the case of the thumb, had not the patient lived at too great a distance from the city to admit of the care necessary during the after-treatment.

MORBUS COXARIUS.

Next the Doctor presented two specimens of the remains of the heads and necks of two femora, both of which had been removed that afternoon. The first case was a boy nine years old, who for six years past had been suffering from hip-disease resulting from a fall. For a year and a half the child had been going about, and had improved very much in his general health; but an abscess existed behind the trochanter major, and from it was a daily discharge of pus.

On making an incision down to the bone, it was discovered that the whole of the head and most of the neck of the femur were gone; the acetabulum had become perforated, and an abscess which was discovered to exist inside the ilium, being limited by the periosteum, communicated with the one above mentioned. The pus from these sources gushed out when the capsule was divided at the point of its insertion at the inter trochanteric line.

The abscess extended down the inner side of the bone, which was cut by the saw, just above the trochanter minor.

The second case was that of a little girl of thirteen, who had fallen when about two and a half years old, and received an injury which resulted in hip-disease. A discharge of matter from sinuses on the inner side of the thigh, near the groin, had been going on for some time.

At the time of the operation the limb was adducted, flexed, and fixed. The operation was done at the desire of the mother, who could not afford the time and expense of caring for the child during the long time it would take to bring about a discharge of the dead bone if the cure had been left to nature. Furthermore, the limb would not have been as useful as after an operation for the immediate removal of the

diseased tissues; for, in Dr. Sayre's experience, cases in which such an operation has been performed give better results as regards usefulness of the limbs. At the operation it was found that the head and neck of the femur were almost completely gone, a fragment the size of the last phalanx of a thumb representing all that remained of the latter; and, what was unique in the doctor's experience, the acetabulum had become filled with new material, and a new facet had formed above it, on which the upper extremity of the femur rested, being still embraced by the proper capsule, which had become displaced with it, and no luxation out of the capsule had ever taken place. The abscess had extended down into the bone-tissue on the inner side of the femur, but had not yet perforated the medullary canal.

These were the forty-second and forty-third cases in which Dr. Sayre had performed this operation, and all the cases excepting these have been in patients who were at the time of the operation almost in *articulo mortis*, and the operation had been made as a last resort. These patients, on the contrary, were able to go about, and were in a pretty fair condition as regards their general health. Of these forty-three cases only eight have died, and six of the deaths occurred among the first twenty cases. The cases were not picked ones, and in those in which the result was fatal the death did not appear to be hastened by the operation.

Both the patients were put into wire breeches.

Dr. Finnell asked if Dr. Sayre ever exsected the head of the femur when anchylosis had taken place.

Dr. Sayre said he never did it unless for the correction of deformity; and in such cases he would make a new joint, by cutting a section of bone from the healthy tissue, according to the method he had already published. When anchylosis has taken place, and the position of the limb is good, he attempts no operation at all.

GLIOMA OF RETINA—EXTIRPATION OF EYE.

Dr. Knapp presented an eyeball removed by him from a child two months ago, and which presented a glioma of the retina. The disease was first noticed six months before its removal, and two months later was shown to an oculist. It is not known whether an operation was advised or not. When Dr. Knapp saw the child for the first time, the eyeball was enlarged, inflamed, hard, and protruding. The anterior chamber was shallow; the pupil large and immovable, the lens transparent, and the vitreous chamber filled with a dirty, yellowish substance. As the diagnosis was evident, an immediate operation was advised and consented to, and was at once executed. It was found that there was an episcleral tumor around the optic nerve, which itself was thickened, and, therefore, another piece of it, as far as it could be reached in the orbit, was excised. The specimen presented to the Society showed the ordinary condition of glioma, or encephaloid tumor of the eye. It filled the entire vitreous chamber, and formed an additional tumor on the outside of the sclerotic of about the size of an almond.

As could have been anticipated, a relapse of the pseudoplasm followed soon. A tumor in the temple, on the side of the extirpated eye, of a softish consistence, in immovable connection with the bone, grew in two months to the size of a goose's egg. Several other smaller tumors made their appearance at other parts of the skull.

Two weeks after the operation, a local recurrence was noticeable in the orbit, which increased very rapidly in size, ulcerated, and bled freely. Another tumor, apparently of the same nature, developed in about the centre of the right half of the lower jaw. The child died from exhaustion a little more than two months after the extirpation, and Dr. Knapp was able to present to the Society its skull. The calvaria showed, on its inner side, a great number of vascular exostoses, arranged like walls around free spaces which looked like depressions on the inner table of the skull. Corresponding to these crater-like depressions, there was a great number of hemispherical, soft, extremely vascular little tumors on the outer surface of the dura mater. There were six or eight subperiosteal tumors in both the temporal and frontal regions, and another one on the right lower jaw, which had been noticed during life. The bone corresponding to the largest of these tumors, situated in the right temple, was rough, reddish, and thinned. There was another one on the inner table of the cranium, inseparably connected with the dura mater. The cranium itself was healthy, but somewhat corroded in the right temporal region.

The nature of all these tumors Dr. Knapp pronounced to be that of a very vascular glioma—the so-called fungus hæmatodes of earlier writers. The epicranial tumors, and those on the outside of the dura mater, being unconnected with one another and the original retinal tumor, must, the Doctor thought, warrant their being considered metastatic.

There are only four or five instances of gliomatous metastases on record. The picture of the present case in its outward appearance greatly resembled that of the first case of the kind, which was described by the Doctor in his treatise on intraocular tumors. It differed from the same, however, as the metastatic tumors did not originate in the diploë of the bones, but were subperiosteal. Recently, another case had been shown at the Philadelphia Pathological Society by Dr. Norris, which, to judge from the short description in *The Medical Times*, should be identical with the specimen exhibited by Dr. Knapp.

With regard to the prognosis in the case of gliomatous tumors in general, the Doctor mentioned that they were exceedingly malignant; yet some few cases were on record in which relapses have not occurred. He had extirpated more than three years ago, in this city, an eyeball affected with glioma of the retina, and the boy does not, as yet, show any symptoms of its recurrence or of ill-health. These observations seem to confirm the notion that the initial stage of glioma is benign.

EPITHELIOMA OF LEFT EYELIDS.

Dr. Knapp next introduced a patient suffering with epithelioma of the left eyelids, from whom he hopes to remove the disease, preserving the eyeball, and constructing new lids. The first pimple was noticed fifteen or sixteen years ago, and was very slow in its growth until eighteen months ago, since when the ulceration has attacked the bone in the lachrymal region. Dr. Knapp thought the tumor extended to the apex of the orbit, which was usually the case when they had attained a size like the one presented; but he hoped to preserve the eyeball, though, perhaps, half of it might be denuded. Certain tumors, called cylindroma, are found in this region, and are very prone to relapse.

NEW YORK ACADEMY OF MEDICINE.

Stated Meetings, February 20 and March 6, 1873.

Dr. Ellsworth Eliot, President, in the Chair.

At the Stated Meeting, held February 20th, Prof. Henry D. Noyes, M.D., made some interesting remarks

on the "Indications for General Pathology in the Diseases of the Eye," with illustrations by the magic lantern.

THORACENTESIS.

Dr. Chas. A. Leale, at the Stated Meeting, held March 6th, read an important paper on "Thoracentesis," based on recorded cases occurring during the past eight years, and closed with these conclusions:

After carefully considering the subsequent histories of all the patients on whom I have performed thoracentesis during the past eight years, it has proved successful in every instance, either by not only preventing death, preceded by the most agonizing symptoms that the physician is called upon to witness, but in the majority of instances we may confidently hope a restoration to at least very good health.

We should, as in tracheotomy and abdominal paracentesis, prefer to use the scalpel to open the chest. 1st. As a safer procedure. 2d. An incised wound is known to heal—if required—with greater certainty. 3d. By using a long male silver catheter, the most dependent part of the chest can be emptied of its fluid contents, and there is no danger of pricking the lung from change of position or movement of patient while the liquid is being withdrawn, as noted by Dr. Allbut. 4th. When pus has commenced to undergo that change preparatory to absorption, the probabilities are, that very little, if any, will be reproduced after the operation, if the wound is immediately closed. 5th. That in closing the wound under the above circumstances, the little atmospheric air admitted, and the small quantity of pus left behind, are very soon absorbed. 6th. That if pus should again accumulate in the chest, the operation is so easy, the pain so slight, and the closure so rapidly accomplished, that a repetition is nothing to be feared, and really causes less prostration than perhaps sometimes where a large incision is made, and perhaps pus formed with greater rapidity. 7th. That atmospheric air, pus and blood, even to the extent of about eight ounces, may be absorbed, and that the injured compressed lung can again resume its normal condition, as so conclusively proven by the recorded post-mortem examination. 8th. That when unhealthy decomposition has commenced, the wounds should be left open and the parts carefully disinfected. 9th. That thoracentesis should oftener be performed for the quick removal of fluid from the chest, even in far advanced phthisis pulmonalis; when relief may be obtained, life prolonged, and painful death averted.

Dr. Peaslee referred to the importance of the paper, and to the fact that he performed paracentesis and thoracentesis on a patient, in 1851, before Dr. Bowditch reported his cases. A full history of the case was given.

The President stated that he had notes of twenty cases of thoracentesis, although his cases for the last two or three years had not been recorded. In one case the operation was performed 5 times; in another 3 times; and in 8 cases, twice—either with Dr. Bowditch's instrument, or the author's adaptation of Davidson's syringe; nine of his cases were fatal; but, even in these, the operation gave relief. Pneumo-hydrothorax existed in 4 cases. In not one of the 20 cases did the operation fail to produce relief, or was there any bad effect. He thought that the operation was useful in some cases of pulmonary tuberculosis, giving expansion to the lungs. If we knew the patient had pneumo-hydrothorax before the operation, it would be questionable whether the operation should be performed, without there was a good deal of dyspnœa.

Dr. Peaslee inquired if he had operated in cases of hydropericardium, and received a negative reply. The President remarked that it had been done, but could not recall cases. He would not hesitate to do it.

In answer to the question of Dr. A. C. Post, whether hydro-pneumothorax was not always, or necessarily fatal, he said that the prospect of recovery in cases of great dyspnœa was very small, but recovery sometimes took place, and related a case in point.

The following donations to the library were announced: Two copies of the U. S. Marine Hospital Service, for 1872; copy of the Edinburgh Medical Journal.

The resignation of Dr. P. W. McDonnell, as a Resident Fellow, was unanimously accepted.

The President stated that at the next meeting a paper on "Galen and Paracelsus" would be read by Prof. J. C. Dalton, M.D. Dr. Wm. Detmold would also describe a new method of "Treating Facial Paralysis."

The Academy then adjourned.

Stated Meeting, April 3, 1873.

Dr. Austin Flint, President, in the Chair.

Drs. Leroy Milton Yale, John J. Mason, and Cornelius R. Bogert were elected Resident Fellows.

On motion of Dr. Alfred C. Post, Drs. S. S. Purple and W. C. Roberts were appointed a committee to draft resolutions on the death of the late Josiah C. Nott, M.D., a Fellow of the Academy, who died March 31, in Mobile, Alabama.

OPIUM—ACUTE URÆMIA.

Prof. Alfred L. Loomis read a lengthy paper on "Acute Uræmia," which will be published in full in our columns. He showed that morphia, injected hypodermically, is a proper and safe remedy in cases of acute uræmia.

Dr. Chamberlain, at the suggestion of Dr. Peugnet, had employed in two cases of this disease the benzoate of ammonia for neutralizing and eliminating the poison from the system. In a case which was seen by Drs. Loomis and Flint, the remedy was given when the patient was in a stupid state; in a short time there was increased urination. As yet he could not speak with much emphasis concerning the value of this remedy.

Dr. Anderson mentioned a case of spasms, occurring six hours after confinement, which was relieved by a full dose of calomel followed by an injection of turpentine. The previous administration of ether only partly relieved the patient.

Dr. Hubbard was pleased with Dr. Loomis' paper, and should in the future employ the hypodermic injection in this class of cases. In puerperal eclampsia, he was sick and tired of chloroform, but would advocate the infusion of digitalis and, in some cases, bleeding. He had had but little experience with uræmic convulsions.

Dr. J. W. Richards was happy to hear that opium was beneficial in controlling convulsions, and that the author of the paper, the son of one of his old playmates, was advocating the use of it. Two cases of hysterical convulsions were related, occurring in his practice, which were controlled by large doses of this agent. In one case he gave forty grains of opium and two ounces of laudanum in one night, which, he facetiously remarked, "almost controlled the convulsion." He saw no impropriety, but *propriety* in the use of opium in cases of acute uræmia, and in connection venesection.

The President introduced Dr. James P. White, of Buffalo, who returned thanks for the privilege of meet-

ing with the academicians, and stated that in some cases of puerperal convulsions he would not confine himself to hypodermic injections. Perhaps the profession were riding the hypodermic hobby a little too hard. Although we had been told that opium could not be given in cases of cerebral obstruction, the President would recollect a case which occurred at Black Rock, more than a quarter of a century ago, in which an enemata of opium controlled the convulsion. Since 1851 he has been in the habit of giving in some form an opiate, in conjunction with an anæsthetic, to control the convulsions. It was important, as Dr. Anderson had remarked, "to let off the steam," but calomel was not as good as other remedies; croton oil, prepared with sugar and placed on the tongue, was an effective agent. It irritates the mucous membrane of the entire intestinal canal, proving a revulsive. The theory of Braun, that every patient with convulsions was in an anæmic condition, he could not accept; consequently, he would perform venesection occasionally.

The Academy then adjourned.

Correspondence.

REORGANIZATION OF THE AMERICAN MEDICAL ASSOCIATION.

To the Editor of the Medical Record.

Sir: As the matter of reorganizing the American Medical Association has been discussed in your columns, as well as in other journals, permit me to say that I think no better model for it can be found than our State Society. I therefore have drawn up, and propose the enclosed plan for its reconstruction. This is far from being complete, as I only want to point out a direction in which improvement can be had. If there is not some radical change soon made, I can only look forward to, and hope for the speedy death of an organization that, whether representing or misrepresenting us, does so much to make the profession in this country appear ridiculous.

Different views are held as to the proper work of the Association—one being that it should discuss scientific matters as well as govern the medical profession; another is, that it should simply be a governing, and not a scientific body. This is the opinion held by the Boston *Medical and Surgical Journal*, which proposes that it be composed of two delegates only from each State. If this view of its purpose is correct, then 309 delegates are many more than are needed. I am in favor of making the Association a scientific as well as a governing body.

It might also be well to consider whether the Association could not with advantage assume the charge of preparing the U. S. Pharmacopœia, and rescue it from the trade influences that seem to be acquiring control over it.

The following plan of organization would probably answer all good purposes:

The American Medical Association shall be composed of delegates and permanent members.

The Medical Society of each State may send as many delegates as the State has representatives in Congress, but any State that may have only one representative shall be entitled to send two delegates. The number of representatives is 292; one additional delegate from Delaware, Nebraska, Nevada, and Oregon (4) will give a total of delegates from States of 296.

In addition to those from the several State Societies, the following organizations shall be entitled to representation:

The Medical Society of District Columbia	2
The Medical Department U. S. Army	2
" " " " Navy	2
The U. S. Marine Hospital Department	1
The Association of Superintendents of Insane Asylums	2
The Association of Teachers in Medical Schools	2
The U.S. Pharmaceutical Association	2
Giving a total of delegates of	309

Ten permanent members may be elected annually in the following manner: the delegates from the different medical societies shall be divided into ten equal or nearly equal geographical sections. At each meeting each section may elect a permanent member, who shall reside in the part of the United States represented by the section, and who shall have attended two annual meetings as a delegate.

Permanent members shall have all the rights and privileges of delegates.

Delegates from the societies and associations named above, shall hold office for four years, except that of those first elected after this change takes effect; one-half shall hold two years, one-half of each delegation shall thereafter be elected every two years.

No State Society, after the year 1880, shall be entitled to representation unless it be composed of delegates from county societies, with or without the addition of permanent members, who shall have first served as delegates.

Meetings shall be held annually; each alternate meeting being held in New York City.

An annual assessment of $5 shall be made on each delegate and permanent member. Money required to carry on the work of the Association in excess of the amount thus received shall be assessed upon the several Societies represented in proportion to representation.

J. S. Prout, M.D.

Brooklyn, March 31, 1873.

ARMY NEWS.

Official List of Changes of Stations and duties of Officers of the Medical Department, U. S. Army, from April 5, 1873, to April 18, 1873.

White, Robert H., Assistant Surgeon.—Relieved from duty in the Department of the South and to report to the Commanding General Department of the Lakes, for assignment to duty. S. O. 74, A. G. O., April 9, 1873.

Kimball, J. P., Assistant Surgeon.—To proceed to Yancton, D. T., and report to the Commanding Officer, Battalion 7th Cavalry, for duty upon the Yellowstone Expedition. S. O. 64, Department of Dakota, April 2, 1873.

Corson, Joseph K., Assistant Surgeon.—To report in person to the Commanding General Department of the South, for assignment to duty. S. O. 74, c. s., A. G. O.

Matthews, W., Assistant Surgeon.—Relieved from duty at Willett's Point, N. Y. H., and to report in person to the Commanding General Department of the East, for assignment to duty. S. O. 78, A. G. O., April 12, 1873.

McMillin, Thomas, Assistant Surgeon.—Died, April 6, 1873, in Camp at Headquarters, Modoc Expedition.

Medical Items and News.

New York Medical Library and Journal Association.—At the stated reunion of this Association, held April 4, 1873, Dr. John C. Peters, President, in the Chair, Dr. R. A. Vance read a short paper on "The Ophthalmoscope as a means of Diagnosis in Tubercular Meningitis and the Diseases which simulate it." Drs. O. D. Pomeroy, T. R. Pooley, Wm. C. Roberts, and the President made remarks upon the paper. The following donations were announced:

The private library of Dr. John H. Griscom, LL.D., comprising 300 bound volumes and between 500 and 600 unbound journals and monographs, and 12 elegant anatomical plates, life size.

Pamphlets presented by Dr. J. H. Emerson.

Thomas's work on Diseases of Women, presented by the author.

Framed engraving of Sam'l L. Mitchell, M.D., LL.D., presented by the Librarian.

Transactions of the Medical Society, State of New York, 1872, presented by the President.

Framed portraits of deceased New York and American physicians are desired for the adornment of the walls of the Association; a large number have already been received.

Measures are now being taken to secure complete sets of the transactions of every medical society in the United States. Secretaries of the various medical societies are earnestly requested to send copies of transactions to the Librarian, 107 East 28th Street.

Home for Incurables.—The managers of the Home for Incurables, West Farms, N. Y., are erecting a commodious building, to cost about $100,000, on the estate of the late Jacob Lorillard, near Fordham.

Death of a Prominent English Microscopist.—Dr. Edward Latham Ormerod, F. R. S., of Brighton, England, an accomplished microscopist, died recently. His most important professional studies were on the diseases of the heart.

Prize Medal of the British Medical Association.—The Hastings gold medal, value twenty guineas, is offered annually by the British Medical Association as a prize for an essay on some subject connected with medical science. The subject for 1873 is: "On the Pathology and Treatment of Ovarian Diseases," and the award will be made at the annual meeting of the Association in August.

School of Medicine in Paris.—The following new appointments have taken place in the School of Medicine in Paris: M. Lozain is appointed Professor of the History of Medicine; M. Lefort, Professor of Practical Surgery; and M. Charcot, Professor of Pathological Anatomy.

Drug Stores in the United States.—There are 14,000 drug stores in the United States, and the number of persons employed in the various branches of the drug business is estimated at 135,000.

The Woman's Medical College of the New York Infirmary.—Dr. A. D. Rockwell is delivering a course of twelve lectures on electro-therapeutics in this institution.

Howard Hospital, Philadelphia, Pa.—The 19th annual meeting of the contributors to the Howard Hospital and Infirmary for Incurables was held March 31st, 1873. During the year ending March 1st, 1873, there were registered at the hospital 7,139 new patients. Of these, 2,727 were males and 4,412 females; 3,670 were Americans and 3,469 foreigners. The medical board is as follows:—*Physicians*—Drs. Joseph Klapp, A. Paul Turner, Wm. B. Atkinson, S. C. Brinckle, Thos. S. Harker, Horace Williams, Laurence Turnbull, and David Burpee. *Surgeons*—Drs. T. H. Andrews and Oscar H. Allis. *Resident Physician*—Dr. Wm. H. Parrish.

Decennial Catalogue of the Bellevue Hospital Medical College.—This elegantly-bound volume is entitled: the "First Decennial Catalogue of the Trustees, Faculty, Officers, and of the Alumni of the Bellevue Hospital Medical College, of the City of New York, from 1861 to 1871," and is compiled by Fred'k A. Castle, M.D., Historian of the Alumni Association. Dr. Leroy M. Yale gives the history of the school from its organization to 1872. The total number of names of graduates in the catalogue is 1,073. The names of 18 graduates, who have become irregular practitioners, are properly omitted. The tinted paper, clear type, and the general arrangement of the Catalogue have not been equalled by previous works of other similar organizations.

Registered Pharmacists.—The members of the New York Board of Pharmacy have published the list of 397 registered pharmacists in New York City, to January 25th, 1873, with their addresses. The names of 363 registered assistants are appended. The members of the Board are as follows:—Wm. Neergaard, M.D., President; Paul Balluff, Theobald Frohwein, Wm. Manlius Smith, M.D.; Francis H. Weismann, M.D., Secretary. Session for examinations, on Monday, Tuesday, and Wednesday, of the months of February, April, June, August, October, and December.

British Medical Association.—The annual meeting of this Association will be held this year in London. The sessions occur on the 6th, 7th, and 8th of August. The present roll of membership has upwards of five thousand members.

Society of the Presbyterian Hospital, N. Y.—The fifth annual meeting of this Society was held April 9th, 1873, in the chapel of the hospital building. Interesting addresses were made by Rev. Drs. Vermilyea and Hall. The report of the treasurer showed that of the proposed endowment fund ($250,000), all had been subscribed but $19,000.

Jefferson Medical College.—The faculty and alumni of this institution are very much disappointed over the failure of their application to the Pennsylvania State Legislature, for an appropriation towards the establishment of a hospital in connection with the school.

American Medical Association.—The Transactions of this Association, vol. 23, 1872, show, that since its organization in 1846, there have been 2,083 permanent members; of these 526 have died—leaving 1,557 living members.

New York Medical Association.—At the annual meeting of this Association, organized in 1849, the following officers were elected for 1873: *President*—J. Haven Emerson, M.D.; *Secretary*—Lucius D. Bulkley, M.D.; *Treasurer*—S. T. Hubbard, M.D.

New York College of Pharmacy.—Professor C. F. Chandler, Ph.D., delivered an interesting lecture on "Modern Pharmacy," April 17th, 1873, in the new lecture hall of the College, University Building, University Place.

Death of a French Medical Editor.—Dr. Marchal (de Calvi), the editor of the *Tribune Médicale de Paris*, died of apoplexy, February 24th, 1873, aged 57. He was successively the editor of the *Gazette des Hôpitaux*, *Revue Chirurgicale Française*, and the *Recueil des Mémoires de Médecine et de Chirurgie et de Pharmacie Militaires*. He was the author of the important work entitled, "*Recherches sur les Accidents Diabétiques, et Essai d'une Théorie générale des Diabètes.*"

Medical College Commencements.—The 31st annual commencement of the St. Louis Medical College took place March 12th, 1873. Diplomas were given to 60 graduates. At the 27th annual commencement of the Med. Dept. of the University of Buffalo, held February 25th, 1873, degrees were conferred upon 40 graduates.

Prizes.—M. Malherbe has been awarded the Prix Duval of the Society of Surgery of Paris for his researches on "*The Febrile Condition in Diseases of the Urinary Organs.*" The prize subject of the Society of Medicine and Surgery of Toulouse, for 1874, is as follows: "*On the purity of chemical medicines most commonly employed: indicate the most certain and easy tests.*"

The Medical Record of London, concerning which we have had something to say before, has changed its name to *The London Medical Record*. This is as it should be. There will now be no danger of confounding one journal with the other.

Liebig.—Baron von Liebig, the world-renowned chemist, died at Munich April 19th, 1873. He was seventy years of age.

Dr. James L. Brown.—The next number of the *Medical Record* will contain the liknesses of Drs. James L. Brown and Wm. J. Macneven.

Princeton College.—The library of this venerable College has received a large increase by the purchase of the Philological Library of Professor Frendenberg, of Berlin, containing 10,000 volumes.

New York Academy of Medicine.—At the Stated Meeting, May 15th, 1873, Dr. Charles P. Russel will read a paper "On the Mortality in the various States in the Union."

Death of Dr. J. C. Nott.—At a Stated Meeting of the New York Academy of Medicine, held April 17, 1873, the following preamble and resolutions, presented by Drs. W. C. Roberts and S. S. Purple, were adopted and ordered to be entered on the minutes:

Whereas, It has pleased God, in his own wise providence, to take from among us our late associate, Dr. Josiah C. Nott, therefore:

Resolved, That the demise of this eminent scholar and experienced practitioner, at a comparatively early age and amid active professional usefulness, is a grievous loss both to the science and the art of medicine, the Academy and the public.

Resolved, That by his literary labors, his teachings, his papers on yellow fever, his extensive and valuable ethnological researches, his surgical and gynæcological skill, and his great mechanical ingenuity, he adorned and advanced the cause and progress of American medicine.

Resolved, That we deplore, in his death, the loss of an amiable and courteous gentleman and much esteemed associate, and will cherish his memory with affectionate regret.

Resolved, That a copy of these resolutions be given to the family of the deceased, and published in the medical journals. Austin Flint, M.D., President.

Wm. T. White, M.D., Secretary.

At a Stated Reunion of the Medical Library and Journal Association of New York, held April 18, 1873, Dr. John C. Peters, President, in the Chair, the following preamble and resolutions were read and adopted:

Whereas, This Association, having learned of the death of Josiah C. Nott, M.D., a successful and honored physician both in the northern and southern sections of our country; therefore,

Resolved, That in the death of Dr. Nott we recognize the loss of one of our most devoted members; a gentleman eminent for his high integrity and his unblemished character, distinguished alike as an ethnologist, gynæcologist, and surgeon, and by his untiring zeal for the advancement of medical science.

Resolved, That as an expression of our sympathy with his afflicted family, a copy of these resolutions be transmitted to them and published in the medical journals; also entered on the minutes of this Association.

Wm. N. Blakeman, M.D.,
Benj. I. Raphael, M.D.,
Bradford S. Thompson, M.D.,
} Committee.

New York Obstetrical Society.—The officers of this Society for 1873 are as follows: *President*, Dr. Benj. F. Dawson; *Vice-President*, Dr. J. H. Pooley, jr.; *Recording Secretary*, Dr. Chas. S. Ward; *Corresponding Secretary*, Dr. E. Noeggerath; *Treasurer*, Dr. G. S. Winston; *Committee on Admissions*, Drs. E. R. Peaslee, Wm. Chamberlain, A. Jacobi; *Committee on Publication*, Drs. B. F. Dawson and Chas. S. Ward.

New York Ophthalmological Society.—The officers of this Society for 1873 are as follows: *President*, Dr. Herman Althof; *Vice-President*, Dr. E. G. Loring, jr.; *Secretary and Treasurer*, Dr. C. S. Bull; *Committee on Admissions*, Drs. J. H. Hinton, J. S. Prout, and H. C. Eno.

Errata.—Under the head of Hospital Reports: The quantity of molasses and water used in Dr. Buck's burn mixture is one pint each. For Garland's cerate read Goulard's cerate. 176th page, 18th line from top, read *none* for *nine*.

New Publications.

Clinical Lectures on Various Important Diseases, etc. By Nathan S. Davis, A.M., M.D., etc. Chicago, Ill. 1873.

Mind and Matter; or Psychological Inquiries. By Sir Benj. Brodie, Bart., D.C.L., Vice President of the Royal Society, with Notes by an American Editor. New York: W. Wood & Co. 1873.

Ozone and Antozone, their History and Nature, When, Where, Why and How is Ozone observed in the Atmosphere, etc. By Cornelius B. Fox, M.D., Edinburgh. London: J. & A. Churchill. 1873.

Handbook for the Physiological Laboratory. By Drs. E. Klein, J. Burdon-Sanderson, M. Foster, T. Lander Brunton. Edited by J. Burdon-Sanderson. Philadelphia: Lindsay & Blakiston. 1873. 2 volumes.

Handbook of Medical Electricity. By Herbert Tibbits, M.D., L.R.C.P., London. Philadelphia: Lindsay & Blakiston. 1873.

Fourth Annual Report of the State Board of Health of Massachusetts. January, 1873.

Text-Book of Physiology, General, Special and Practical. By John Hughes Bennett, M.D., F.R.S.E.R. Phila.: J. B. Lippincott & Co. 1873.

Original Lectures.

A CLINICAL LECTURE ON CASES

ILLUSTRATIVE OF

GASTRIC ULCER (HÆMATEMESIS),

ATTRIBUTABLE TO CIRRHOSIS OF THE LIVER, AND GENERAL SPINAL PARALYSIS.

By AUSTIN FLINT, M.D.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE, AND OF CLINICAL MEDICINE IN THE BELLEVUE HOSPITAL MEDICAL COLLEGE.

GENTLEMEN:—The first case which I present to you to-day is that of Mrs. H., æt. 28, first admitted to the hospital, November 19th, 1872. Her family history is good. She was formerly intemperate, but has been temperate for the last two years. She has always enjoyed good health until about a year ago, when she was taken rather suddenly with vomiting of a blackish material, very much resembling coffee-grounds. She knows of no special cause which should give rise to that vomiting. She was ill for three weeks, vomiting almost constantly, but after the lapse of that time began to get better. About six months after, she had another similar attack, and she knew of no cause for her vomiting at that time. Since her second attack of vomiting her menses have been somewhat irregular, but otherwise she has been healthy. She was regular after the first attack, it seems, and the bearing of this point will be seen hereafter. Three days ago—*i. e.*, Nov. 16th,—she was again taken with vomiting, with no pain at first, but began to suffer severe pain several hours after the vomiting began. Since the attack of pain it has been constant and severe, and she has vomited all the time. Her food does not cause pain, but vomiting, and the pain is in the back and epigastric region. Her urine was normal. When admitted, she got a solution of morphia, a little stimulus, with milk and eggs by enema. Up to the 24th this patient was sustained by nourishing enema, which contained opium and stimulants according to circumstances. Her vomiting ceased, and upon the 24th, she was able to take milk by the mouth without producing vomiting. Upon the 26th she took one ounce of whiskey by the mouth without vomiting, and upon the 27th was reported well. The pain had disappeared, vomiting ceased, and her appetite had returned.

Jan. 7th, 1873, she was readmitted, suffering from violent pain and vomiting again, which had commenced four days before. The pain is now in the small of the back, to the right side, pit of stomach, and left side. When she takes anything into her stomach, and lies upon her back, she does not vomit, but vomits as soon as she lies upon her side.

She has some cough and expectoration of a thick white sputa, and this was present when she was previously in the hospital.

Upon admission this time, she vomited, every few minutes, a thick greenish matter, suffered from pain, and there was some tenderness over the pit of the stomach. She received, to allay this vomiting, hydrocyanic acid and ice.

During the 8th the vomiting and pain continued. And upon the 9th she again began to receive nourishing and stimulant injections, and they were given in the form of egg-nog ʒ ii. at each injection. During the 10th and 11th she vomited occasionally still received the nutritious injection, and upon the 12th her vomiting had ceased altogether.

From this state she began to improve, and at this time, the 16th, is still improving. This is the history of the case.

We have here, gentlemen, a train of symptoms which have recurred three or four times. They were of a very similar character at each time, and are referable to the stomach. They are so much related to the stomach that we may safely assume that whatsoever trouble exists, it doubtless is in that organ.

There is a form of functional disorder of the stomach which is characterized by phenomena not infrequently associated with hysteria, and which manifests itself by a form of persistent, obstinate vomiting. The patients under these circumstances will appear to reject everything, and so it will go on for weeks and sometimes for months, and the wonder is, how the patient can be nourished at all, and still all the parts of the body are in a very good condition. It is a functional affection, and in the treatment of such a case all remedies which may be employed are attended with disappointment so far as good results are concerned. The patient finally ceases to vomit and the case is ended. The best plan of treatment to be adopted in such cases is to bring the patient under the influence of hygienic and moral measures. There is no organic trouble present, nor will it lead to organic trouble, but it is simply one of the various forms of functional disturbances of the stomach.

We could hardly call the present case a case of that kind, for we have here well-defined vomiting of blood. There is a strong point in the history of the case against assuming that it is in any way connected with hysteria, and that is, that she has suffered from repeated attacks of vomiting of blood.

She has had hæmatemesis, and with this, pain has been a prominent symptom. There is a functional disturbance of the nerves of the stomach which we call gastralgia, and it is an important affection. The patient complains more or less of a constant pain, and sometimes of a very acute form; so much so that it takes all the powers of anodynes in some cases to secure relief. In general, it is a hard pain to endure, and usually is accompanied with mental depression. In gastralgia, however, there is no vomiting of blood.

In the case before us the introduction of anything into the stomach excites pain and vomiting. In gastralgia the introduction of food frequently alleviates the pain. We should not hesitate to say that it is not a case of functional vomiting accompanied with gastralgia. It has not the character of gastritis, and there is nothing in the history of the case from which we could infer that she has been exposed to any of the ordinary causes of gastritis.

The question here is this—Is it a case of gastric ulcer? I suppose it to be such a case, for the symptoms which are presented are diagnostic of that affection. The variety of ulcer which I suppose to exist in this case is that known as the round or perforating ulcer. This variety of ulcer is sometimes extremely small; it may be no larger than a pin's head. Sometimes a point no larger than that will open one of the arterial branches, and give rise to fatal hæmorrhage. This ulcer has a tendency to erode the tissues, and thus leads to hæmorrhage by opening vessels of less or greater size; or leads to perforation of all the coats of the stomach, giving peritonitis as the result.

Sometimes there is a complete perforation of the walls of the stomach without the production of general peritonitis, for there is a conservative provision against this. The ulcer gives rise to a circumscribed peritonitis, and this leads to adhesions of the stomach to some of the adjoining organs, or to the walls of the

abdomen, and now if the perforation is complete, the contents of the stomach do not escape into the peritoneal cavity, and the patient escapes a fatal peritonitis. These are the two great sources of danger, viz., peritonitis from perforation, and hæmorrhage.

What are the symptoms which are diagnostic of this variety of gastric ulcer?

It occurs in females much more often than in males.

It occurs usually in young women.

These two points we have illustrated in this patient. There has been considerable discussion in regard to the mode of their occurrence, but these discussions have been quite unsatisfactory. With regard to local symptoms, pain is one which is frequently present, but this symptom is not constant.

These points, viz., sex, age, and pain, when obtained together, are highly diagnostic; but they are sometimes absent in part. There are some peculiarities connected with the pain. It is referred to the epigastric region, and to a small circumscribed space usually. In this case the area within which the pain exists is rather large. The pain is described as of a somewhat peculiar character; of a "gnawing character," is a very frequent expression. In this case the patient refers the pain to the back as well as to the epigastrium. The pain is excited by the presence of food, and particularly certain kinds of food. With the use of stimulant articles of food it is ordinarily excited or aggravated, while with the use of bland articles of diet it is much less. It occurs after the ingestion of food, and while the food is *in* the stomach. If vomiting occurs and the stomach is emptied, the pain is frequently and sometimes instantly relieved. In this case the pain is not connected so clearly with the presence of food as in some cases, and this is not infrequently the case; still, when the patient vomits, she feels much better. Hæmorrhage is one of the most important diagnostic points. If we do not have the benefit of this symptom, we cannot feel that the diagnosis is positive. With that symptom present, we may read with a great deal of positiveness of the diagnosis. Not every case, however, of vomiting of blood is dependent upon the presence of a gastric ulcer. Hæmorrhage occurs occasionally from the stomach as one of those things which we cannot explain; but hæmorrhage from the mucous membrane of the stomach in this condition is not common, and when not dependent upon ulceration is usually dependent upon cirrhosis of the liver.

There is a common impression that hæmorrhage from the stomach is not infrequent as taking the place of the menstrual flow. This, however, is exceedingly rare as far as I can ascertain. There was one case exhibited in this hospital last winter in which there was a complete substitution. In this case there has been some irregularity of the menses, after the gastric disease, but not before, and there is no reason to believe that the hæmorrhage is at all vicarious.

These are the points—vomiting of blood, pain in a circumscribed region in the epigastrium, age and sex—that lead us to the conclusion that the patient has a gastric ulcer. There have been three attacks, and she has recovered from them, and enjoyed good health. There is no inconsistency in this, for it frequently occurs, particularly in those cases in which the habits of life may afford a new provocation to the return of the ulcer. In a considerable portion of cases recovery takes place when the disastrous complications which have been mentioned do not occur.

What are the therapeutical indications in such cases? Shall we begin with the prescription of remedies with the view of bringing certain substances in contact with the ulcerative surface to cause a cicatrization, as we do in the case of an ulcer upon the skin?

I do not think that much can be done in this direction. Most of the remedies will be changed very soon after their introduction into the stomach, and not much can be accomplished in that way. The first indication is to place the organ in such a condition as will render the ulcer most likely to heal. If we have to deal with an ulcer upon the surface of the body, we endeavor to keep it from contact with those substances which give irritation, and so we should treat the stomach. The alimentary supplies, however, generally pass into this receptacle, and we have here a difficulty with regard to the fulfilment of the indication.

In attempting to meet the indication, therefore, we must be guided by the tolerance of the stomach.

Opium, in some of its forms, is almost always serviceable. The aliments should be of a bland character, such as milk, eggs, and the farinaceous articles of diet.

Suppose that these produce vomiting and irritation? We must then nourish the system by enemata. This can be done for a long time if necessary; and the cases are not very infrequent where the system has been thus supported for three weeks or more. In this way, then, the stomach may be left entirely at rest, and renders it practicable to keep up a fair amount of nutrition.

The occurrence of hæmorrhage to such an extent that life is in danger makes the arrest of the hæmorrhage a matter of importance. This, I believe, can be best accomplished by the administration of pieces of ice, and the use of cold applications over the abdomen.

The next patient whom I present to-day is Mr. B——. This patient will illustrate several things, as is not uncommonly the case in hospital cases here and elsewhere. First of all, you will notice that he presents a pallid appearance; there is a little œdema under the eyes, and his face is a little puffy. There is, however, no œdema elsewhere in the body, except a very little over the lower part of the sternum, which is a most excellent place to determine the presence of slight degrees of anasarca. We can often determine the presence of very slight anasarca at this point when it cannot be found at any other point. Now this is connected with the condition known as albuminuria, and when we came to examine this man's urine, albumen was found present in abundance. The quantity of urine, however, is not lessened, and is not much below the average healthy specific gravity, 1016. A single microscopical examination has given us negative results. We have then illustrated albuminuria with slight anasarca. How much importance to attach to that fact we cannot now tell. Whether it is transient, or evidence of chronic affection of the kidney, must be determined by farther observations. Another affection which he illustrates is this: upon last Christmas Day he had a copious vomiting of blood. He says he vomited a pailful of very dark almost black blood, and clotted. Of course we must make a liberal allowance for this statement; but we may assume that he vomited a large quantity of blood, and this is the feature which the case illustrates. What is the rational explanation of this vomiting of blood? There are various conditions which may give rise to hæmorrhage from the stomach, one of which we have just been studying. There is, however, nothing in the history of this case which would point to either ulcer or cancer, which, when present, are fruitful causes of vomitings of blood, and we can, with positiveness, eliminate these causes. Sometimes hæmorrhage takes place from the stomach, and we cannot connect it with anything; but such cases are exceedingly rare as occurring without any pathological lesion

If we connect this hæmatemesis with certain points relative to the habits of the patient, connect it with what we find when we make physical exploration, we shall reach the probable conclusion that the hæmatemesis was the result of *cirrhosis* of the liver. With regard to his habits: for the last fifteen years he has been accustomed to the pretty free use of alcoholic drinks, and he has taken them in this way—before breakfast, and in the latter part of the forenoon. The point is, that he has taken his drinks upon an empty stomach, and taken them without dilution.

This is the manner to take alcoholic stimulants if it is desired to receive the greatest amount of effect from the smallest amount of spirit; and these are the conditions which lead to the production of cirrhosis.

The primary local action is upon this viscus. The spirit is very quickly absorbed in the stomach, especially when taken upon an empty stomach; is conveyed by the vessels and dispersed all through the liver; and so, as a continual dropping wears the stone, so does a continual impression, as in this instance, upon that organ, induce a low grade of inflammatory action, which leads to the development of fibroid tissue, and with that we have cirrhosis.

Now, resorting to physical exploration to determine whether cirrhosis is present or not, we find that there is scarcely any evidence of liver at all. There is no tenderness over the epigastric or hypochondriac region at the present time, and there is no dropsy. The degree of contraction which takes place in the liver in connection with cirrhosis is sometimes remarkable. A case was once shown me in this hospital in whom it was said the liver was upon the *left side*: but careful examination determined that it was an extremely contracted liver upon the right side, and a very large spleen upon the left. Taking this patient's habits into account with the physical evidence that the liver is much diminished in size, it is probable that this was a hæmatemesis depending upon cirrhosis of the liver.

We know that vomiting of blood occurs in connection with cirrhosis of the liver without dropsy, and perhaps in this case the occurrence of copious hæmorrhage might have been preventive as regards the dropsical effusions.

So much for cirrhosis and hæmatemesis.

The case will illustrate still another interesting and important affection. This patient has, first, incomplete paralysis of the upper extremities. He can exercise scarcely any pressure in his hands. He says that there is no difficulty in the lower extremities, and, as you will see, he can move his lower extremities freely in bed, placing them in any position you may desire. But, if it were true that there was no affection of the lower extremities, we should have a case of paraplegia affecting the upper limbs only; but the truth is, the patient has a certain amount of paralysis of the lower extremities, but he cannot appreciate it himself. When asked to walk, his mode of progress evidently shows that there is some defect of motion in the lower limbs that cannot be accounted for by general debility. Sensibility, as far as can be judged by feeling, seems unaffected.

The patient has, therefore, general paralysis.

This may depend upon morbid conditions in the cranium, embraced under that rather indistinct term of general cerebral paralysis.

There is usually, however, more or less impairment of the intellectual faculties associated with this, and a kind of delirium in which the patient imagines that he has been the recipient of some very great good.

We may have general paralysis as the result of a general affection of the spinal cord. There is no evidence of cerebral affection in this man: his intellect is clear, and he has no delirium; and it is therefore probable that we have to deal with a case of general spinal paralysis, induced by some morbid condition of the spinal cord. This morbid condition is especially marked at the upper portion of the cord, and it has selected those fibres which are distributed to the upper limbs. Still farther, the spinal cord is but partially affected, and that only in the motor portion.

The question now arises, What is the morbid condition that has thus affected the spinal cord, and given rise to these local manifestations? This, perhaps, is not easily answered in a positive way. This paralysis came on after the hæmatemesis: he was well up to that time, and had always been well. At that time he took to his bed, and, for the most part, has kept it ever since, but about a week after he first took his bed he noticed a defect of power in his upper extremities. It seems that this did not occur suddenly, but was rather gradual. This fact alone would exclude hæmorrhage into the cord or spinal canal, for in such a case the paralysis must have been sudden and complete. The fact that there is no pain or tenderness would probably exclude spinal meningitis or myelitis. Upon the whole, therefore, it seems to me that this paralysis is to be embraced under the head of functional, and I believe that such is the case.

With a large proportion of the instances in which we have general spinal paralysis the prognosis is favorable, unless it is associated with some general impairment of health; and in making my prognosis, I should say that the patient would recover, being governed by the simple fact that they do recover in a large proportion of cases. It would seem as if this man's health was seriously impaired, but I am inclined to think that he will recover from the paralysis as it is, and much more positively inclined shall I be, if the renal trouble proves to be a transient one. The patient has been in the hospital too short a time to determine what the prospect will be. This man will be placed upon a liberal, bland diet, and the progress of his case carefully observed.*

ON BRIGHT'S DISEASE.

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LECTURE II.

GENTLEMEN:—At my last lecture I directed your attention to the clinical history of the inflammatory form of Bright's disease. This evening I invite your attention, first, to the clinical history of the waxy or amyloid degeneration of the kidney, then to the cirrhotic, and then pass to the consideration of the treatment of the different forms of Bright's disease.

First, with regard to the waxy or amyloid kidney. This form of Bright's disease never occurs in persons who are in perfect health. It is always slow in its development, and its symptoms in the early stage are not well marked. It usually manifests itself as follows: a person who for some time has suffered from some chronic form of disease, in which there has been more or less of exhaustion attending its progress, such as

* It was subsequently ascertained that the paralysis in this case depended on an injury of the neck. The patient died, and the autopsy showed a partial dislocation of the second cervical vertebra, with fluid blood effused outside of the dura mater. The case seemed to illustrate the liability to overlook injuries of the vertebræ, from their latency as regards local subjective symptoms.

syphilis, caries, necrosis, or some form of chronic suppuration, more particularly chronic suppuration connected with diseases of the bones, notices that he is losing strength, that he has less mental and physical vigor than he is accustomed to have; unable to do the same amount of work, it may be, that he has been in the habit of doing; that there is a great increase in the quantity of his urine; that he is now obliged, perhaps, to get up and pass his urine two or three times a night, and at these times he often passes large quantities; he also notices a fulness of the abdomen that he never noticed before, and there is perhaps a sense of weight about the upper part of the abdomen—a dragging sensation; he very likely has detected a tumor in the right hypochondrium, and perhaps one in the left; he is also more than usually fatigued, and has dyspnœa after continued exertion; there is perhaps a little œdema about the ankles, especially at night; he has been noticed by his friends to be growing pale; his perspirations are of a urinous odor, but does not perspire readily; certain articles of food which have never before disagreed with him now trouble him, especially fats, and he may have occasional vomitings.

This train of symptoms coming on in a person who has been the subject of any of the forms of disease to which I have referred, leads one to suspect that the amyloid degeneration of the kidney is taking place. If upon farther examination an enlargement of the liver and spleen is found, your diagnosis is almost certain.

There are, in connection with this form of kidney disease, the same as in connection with the inflammatory form, three prominent classes of symptoms, viz., those referable to the urine, the dropsy, and to the nervous system.

The urine, as I have stated, is abundant. The patient may be passing as high as ℥ cc. in twenty-four hours, and ℥ lx. is a small quantity to be passed by a patient with amyloid kidney. The urine is light-colored, looking very much like clear water, or slightly amber color, and has a low specific gravity; sometimes as low as 1005. The urine always contains some albumen, and I have yet to see the first case where I could not find a trace, at least, and sometimes it is abundant, although as a rule it is not abundant. Upon making microscopical examination, casts are very commonly found, but they are not numerous. It will be necessary often to make two or three examinations before finding them, and when found they are usually the large hyaline casts, or finely granular casts.

In a pure case of waxy kidney you do not get granular epithelial or fatty casts, but it must be recollected, however, that we often do have the other form of casts present when we have the waxy or amyloid kidney, but in such cases there is more than simple amyloid degeneration, and the inflammatory form has been engrafted upon the waxy. The large hyaline casts and the finely granular are the casts which form the diagnostic basis. The large quantity of urine passed attracts the patient's attention; and not infrequently a person with waxy kidney will come to you with the idea that he is suffering from diabetes, and the quantity of urine passed is so large, such a rapid loss in flesh and strength, with a disinclination to exertion associated with dyspeptic symptoms, that, unless you are upon your guard, you will be led into the same error; but upon examining the urine the question is settled—there is no sugar, but there is albumen and casts, which always may be found by repeating the examination. With regard to the dropsy, it is never very marked in the form of Bright's disease. There is never the general anasarca which we see in connection with the inflammatory form; there may be slight œdema of the feet; you may have slight ascites, which probably depends more upon the changes in the liver than upon the changes in the kidney. In the inflammatory form the dropsy is a marked symptom, especially in the early stages; but if we find general anasarca in connection with waxy kidney, there is something present more than simple waxy degeneration.

With regard to the nervous system, the symptoms arising from affections of that are not so marked as in the other form.

This class of patients do not have convulsions nor coma; they usually die from exhaustion or some complication, such as diarrhœa or ascites; or, in other words, die as much from the effects of a waxy degeneration of other organs of the body as from the degeneration of the kidney. I doubt whether waxy degeneration affecting the kidney only will prove fatal.

The complications ordinarily occurring are waxy degenerations of the liver and spleen, and of the mucous membrane of the intestines. These patients rarely have pneumonia, or bronchitis, or pericarditis, or any of the acute inflammations which I referred to in connection with the inflammatory form. Hypertrophy of the heart is not present in this form, while in the inflammatory form it is always present in the latter stages. It is among the conditions we expect to find in the stage of atrophy of the inflammatory form, and in the cirrhosed kidney; but it is not so with the waxy form, for it is rarely present. It will be seen, therefore, with respect to their prominent symptoms and their complications, that these two forms of Bright's disease differ very widely. It is not very difficult to draw the line of diagnosis between the two forms, unless the waxy is complicated by the inflammatory form, and then the diagnosis can only be made by a most careful study of the history of the case.

The great cause for this form of Bright's disease is syphilis, and syphilis in its tertiary form. It is quite liable to occur in connection with long-continued suppuration, and caries of the bones. Just here is an important practical point, and that is, never allow a suppuration to continue any longer than is necessitated from the nature of the case. It is not wise to wait too long for a spontaneous opening in a case of empyema. Do not suffer too long processes of necroses, waiting for a spontaneous cure; nor wait in any other like position, in which you are liable to have an amyloid degeneration of the kidneys or other organs occurring. A too long-continued empyema may give, as a result, an amyloid kidney, which will very much complicate the case, and be the element of a fatal termination. These are the principal points in the clinical history of the amyloid kidney, and you probably will not be able to recognize it in the first stage; but its second and third stages are generally easily recognized. You may not be able to reach a diagnosis by an examination of the urine, for very many of the same elements are to be found in it as in the atrophied stage of the inflammatory and of the cirrhotic kidney; but taken in connection with a careful study of the history of the case, a positive diagnosis can generally be reached. As regards the cirrhotic form of kidney, it is well to notice that it develops very insidiously. In the early stage there is nothing to indicate its existence. There may be no albumen or casts in the urine, no dropsy, and none of the symptoms which usually mark the presence of the kidney disease, yet at the post-mortem examination kidneys may be found which present very marked changes, and which I described under the head of cirrhosis of the kidney.

Generally, however, this form of Bright's disease is marked quite early by the changes which take place in the nervous system. I remember two cases in which the first thing that attracted the patient's attention was a dimness of vision. The particular thing for which I was consulted was the pain in the head and loss of sight. Generally, however, this class of patients, at first, will complain of dyspepsia. They, too, find that they are not able to work as they have been accustomed to.

They notice that they are passing more than their normal quantity of urine; occasionally the feet and ankles are swollen, particularly after standing or walking for some time; this œdema comes and goes, is most marked at night on retiring—disappearing in the morning on rising. Their complexion assumes a dingy hue. Their countenance has an old, care-worn expression. They are constantly looking forward to a time when they can rest from their ordinary hard labor. This class of patients not unfrequently consult their physician, who prescribes for the relief of their dyspeptic symptoms, with the assurance that they will be all right as soon as they can leave off work and take a rest; and suddenly, when excited by something which elevates them beyond their normal limit, they are seized with convulsions, go into coma, remain in an insensible condition for twenty-four hours, and die. The urine perhaps had been examined the day preceding the convulsion, and no albumen was found, but now it will be found to contain albumen, and perhaps casts.

The chief features with regard to the urine in this form of Bright's disease is the large amount passed, normal color, low specific gravity, fitful presence of albumen, and the casts are mostly long, hyaline and finely granular. I stated that in the waxy form albumen is always present, and the inflammatory form rarely without it in any stage.

The dropsy in this form is never a very urgent symptom. In the latter stages of the disease there may be dropsy of the lower extremities, associated with dropsy of the abdomen, for cirrhosis of the liver is very likely to be associated with cirrhotic kidney. The nervous symptoms are the most prominent symptoms in this form of Bright's disease, and they come and go in a way which is not easily explained. Their mode of production is essentially the same as in the other forms. The most frequent and prominent is headache.

There are no such nervous symptoms present in the amyloid degeneration as are seen in connection with this form. Oftentimes the patient will be delirious, and there have been cases of acute mania dependent upon this form of Bright's disease. Patients are not only nervous and irritable who suffer from this form of Bright's disease, but are likely to have convulsions without any engrafting of the acute inflammatory form upon it. Amaurosis is a form of nervous affection which is frequently met with in this form of degeneration. It occurs most generally quite late in the disease, and is due to neuro-retinitis.

Sometimes we are able to recognize the kidney change by the existence of the neuro-retinitis, when no other symptoms exist. Amaurosis occurs in this and in the latter stage of the atrophied form, as a true neuro-retinitis, while it occurs in the other forms independent of it. It occurs therefore as a real symptom, and as a complication. With regard to the causes of this form of Bright's disease, the most common undoubtedly are gout and rheumatism.

It is what is called the gouty or rheumatic kidney. It occurs also as the result of the steady use of alcohol. It is not the occasional drinking that gives rise to the cirrhosis of the liver, nor is it the occasional drinking that will produce cirrhosis of the kidney, and we are liable to have the two occurring together as the result of long-continued steady use of alcoholic drinks. Garrod mentions that he has frequently met with this condition of the kidney in connection with lead-poisoning. It is not the cirrhotic disease which occurs in connection with chronic heart disease; that change in the kidneys is simply the result of the interference with the capillary circulation of the organ, and the same kind of hardening is seen in the liver and spleen, and dependent upon the same cause. Increased connective tissue does not mark that form of hardening, but there is simply a change in the blood-vessels of the organs. The complications of this form are, first, hypertrophy of the heart, the same as in the last stage of the inflammatory form. The patients are also liable to suffer very much from slight exposures to cold, have bronchitis, not infrequently pneumonia, and inflammations of the serous membranes the same as in the inflammatory form. It is difficult, without a history of the case, to draw a line between the cirrhotic form and the atrophied stage of the acute inflammatory form. The complications and the symptoms are very much the same, but the albumen is not as constant in the cirrhotic form as in the others. The slow development of the disease, and the diathesis of the patient, in contradistinction to an acute history, will help you to reach a diagnosis of this form of Bright's disease.

This is a summary of the symptoms of Bright's disease as it is seen in its three forms. I have given you the striking points only, and must pass on, leaving you to fill up the minor considerations.

We next come to that which most interests our patients, viz., the question of treatment.

The usual form of question with which the patient will meet you is, "You cannot cure Bright's disease, can you, doctor?" In the light of my experience I am able to answer them affirmatively, and I tell them that I can.

I do not pretend that we can cure all forms of Bright's disease, or a majority of the cases that come under our observation; but there are certain classes of cases that we can cure, or at least can help them to get well. It is not too much to say that all cases can be benefited, relieved of their distressing symptoms, have their lives prolonged, and placed in a sufficiently healthful condition that, perhaps, for several years, they may be useful members of society. I do not look upon Bright's disease as being absolutely incurable, yet we should never expect to cure the patient who has the cirrhotic kidney or the waxy kidney, or the atrophied stage of the inflammatory form, but these can receive much benefit, and more benefit sometimes than some other forms of the disease. I shall only make mention of some of the plans of treatment which have been proposed, and then speak briefly of those means which I have found the most serviceable.

The first mode of treatment that was adopted in this disease, when it was regarded as an albuminous nephritis, was general and local bleeding, but this was soon found to be attended with bad results, and mercurials were resorted to with the idea of putting the system under its constitutional effects, and keeping it up for months: this also was abandoned for a like reason. As soon as the pathology of the disease was better understood, an entirely different mode was adopted, based upon pathological changes which take place in different stages of the disease. The mode of reasoning was,—we have an inflamed organ to deal with, and the only way to cure an inflamed organ is to give it rest; that it should be treated upon the same general

principles as an inflamed eye or an inflamed leg would be treated, and the first great principle to be adopted was to give the organs rest.

The plan of treatment, therefore, was to make the skin supplement as much as possible the work of the kidneys, and this was called the diaphoretic plan of treatment. This soon received an important adjuvant in the use of hydragogue cathartics; and these two agencies, diaphoretics and hydragogue cathartics, were the chief agents employed for the elimination of the urea from the system. A leading feature in carrying out the diaphoretic plan was the use of hot-air baths. I have seen many a patient go through this plan of treatment in the hospital, and the result is this: after they have received three or four hot-air baths, assisted by hydragogue cathartics, the œdema begins to disappear, and the general symptoms will be relieved very much, but the trouble is they do not remain relieved. After a short time these patients grow anæmic, lose their strength; the dropsy disappears, it is true, but the complaint is, "I am terrible weak;" and as this process goes on we reach a point beyond which we no longer can relieve the dropsy, and sometimes patients have gone into convulsions while taking the hot-air bath. The use of diuretics was forbidden, or if used at all, they were to be used very sparingly. The theory was that the kidneys must rest; an inflamed kidney should not be stimulated.

Several years ago I became impressed that this diaphoretic plan of treatment was wrong, for it rapidly depleted patients that could not bear depletion. For the same reason I have objected to the use of hydragogue cathartics, not that I discard them entirely, but I simply hold them as reserves, for they do not enter prominently into my plan of treatment. In the study of a plan of treatment let us ask ourselves the simple question, What do we wish to accomplish in the inflammatory form of the disease? We wish to eliminate the urea, and remove the obstruction which exists in the tubes of the kidneys. We also wish to obviate the effects of the urea upon the nervous system. How are these indications to be met, and what are we to use to accomplish the desired purposes mentioned? The first step in the process is to remove the exudation which is in the tubules of the kidneys; for it not only prevents the elimination of the urea by preventing the kidneys from performing their proper amount of work, but if it remains in the tubules it develops a degenerative inflammation.

In treating a case of bronchitis, we would not place an obstruction in the bronchial tubes and prevent the expectoration, but we would aid, in all possible ways, free and unobstructed expectoration.

The same condition of affairs obtains in Bright's disease, and the exudative material so obstructs the urinary tubules as to prevent the organs from performing their proper functions. If by prompting the kidneys to increased secretion they can be made to pour out fluid enough to wash out this material which obstructs free passage for the urine, we have accomplished an important end in the management of the case.

To accomplish this I recommend a remedy which will increase the urinary secretion without stimulating the kidneys. That remedy is digitalis. I am convinced that it does not act as a stimulating diuretic, but that it acts upon the local circulation of the kidney. Clinically, digitalis acts as a diuretic without stimulating the kidneys. Inducing an increased flow of urine in this way we rid the system of its urea much more completely than we can by the skin or bowels, for these are both unnatural ways of eliminating it.

One word with regard to digitalis. We have for many years been taught to believe that while administering this drug we must guard against its "cumulative effect," so called. All this I have come to disregard; for I have repeatedly administered half-ounce doses of the infusion every two hours for 48 hours, and have never seen any unpleasant effects from thus using it. If any benefit is to be received from this drug in this disease, it *must* be administered in large doses. The dose which I usually recommend is ℥ss of the infusion, and in the acute stage of Bright's disease it may be given every two hours for 24 hours, and then wait a little and watch its effects. If the diuretic effects are not satisfactory, they may be increased by the addition of bitartrate of potassa. Its administration in more moderate doses, say ℥j three times a day, must be continued for weeks. In those cases in which the exudative matter filling the tubes is the result of a catarrhal inflammation of the tubes, if it can be washed out, nature forms new epithelium for the repair of the tubes, unless the stimulants which have produced the increased secretion of urine are continued. Hence the necessity of watching the effect of the remedy. The external application of dry cups over the kidneys, and following them with poultices, are of service. The digitalis leaves may be used for a poultice after the dry cupping, and thus applied, they will increase the diuretic effect of the drug administered internally. After the use of the dry cups, and the congestion and hyperæmia to some extent are relieved, if your anæmic symptoms are still urgent, you may resort to hot-air baths and hydragogue cathartics. This makes the principles for the accomplishment of the first proposition in the management of acute Bright's disease.

And now let us consider the effect of the urea. This is the element that produces the convulsions; perhaps the patient has already had one or more when you are called to see him. What are the means that we have for controlling the effects of urea upon the nervous system? I believe that opium is, of all drugs, the best. If called to see a patient who has already had a convulsion, or is having symptoms of convulsions, I should not hesitate to throw into his arm 10, 15, or 20 drops of Magendie's solution of morphine by the use of the hypodermic syringe. It will not kill him; but, upon the other hand, I have seen it many times produce a calm, quiet sleep, profuse perspiration, increase the flow of urine, and within a few hours the patient awake to consciousness as the result. As regards the amount that may be used in this condition, I am not prepared just now to limit, especially after the experience I have had this afternoon.

I was called in consultation about 5 P.M. to see a patient whom I had seen about a year before, when the diagnosis was waxy kidney. At this time he is probably suffering from an acute attack of the inflammatory form engrafted upon it, the result of a wetting. He had been seized with convulsions, and when his attending physician saw him first he had had several, and he gave him a hypodermic injection of 20 drops of Magendie's solution.

The effect was to materially quiet the patient; but again showing some symptoms of returning convulsions, he received another injection of twenty drops, and in this he was watched, receiving fifteen or twenty drop injections, upon the least return of symptoms indicating convulsions, until he had received eighty-five drops administered in this manner. That man had remained unconscious from the time of his seizure, all through the day; but when I saw him at the hour indicated, he awoke and called me by name, although I had not seen him for nearly a year previous to this visit. This is not

the only instance I could cite you to, where the patient was supposed to be dying from the influence of urea, who were saved, as I believe, from immediate death by the use of morphine.

As regards the treatment of the second stage of Bright's disease of the inflammatory form, where the fatty degeneration has taken place, the same forms of treatment are indicated.

The indications are the same, and the same treatment, as far as diuretics are concerned, is to be instituted; but here we wish something in addition. The acute symptoms are passed, and the anæmia begins to show itself. You would commence the treatment of these cases by the use of iron, tonics, fresh air, best hygiene possible, and do not let them take stimulants as they are ordinarily taken, such as whiskey and brandy; but they may take certain forms of wine. The best wines to be given in this condition are our native wines and the light French and German wines, and these patients improve by allowing a little wine at dinner. All the time the secretion from the kidneys must be watched, with regard to its quantity, density, kind of casts, etc., and I have little doubt but that a certain proportion of cases may be saved even in the stage of fatty degeneration. If the patient is cured in this stage, it must take place before that molecular absorption occurs which leads to the destruction of the tubes, and announces the beginning of the stage of atrophy. In the last stage, or stage of atrophy of the inflammatory form, considerable benefit may perhaps be derived from a change to a warm climate, keeping the surface of the body well covered, free from exposure, and making life as comfortable as possible.

The urine again should be watched carefully, and if found to be a little scanty, order the patient to take a dose or two of digitalis, and in that way the patient will get along very well. He will also receive much benefit from the use of tonics and cod-liver oil, and the general plan of treatment consists in watching the patient as regards the anæmia, quantity and character of urine, and introducing remedies according to the indications.

As regards the waxy kidney, nothing can be done as far as cure is concerned, and it must be treated upon the same principles as you would treat waxy conditions elsewhere in the body.

If dependent upon syphilis, the treatment of the syphilis is to be the leading feature in the curative plan; if dependent upon chronic suppuration, remove the cause if possible, and in general the patient will receive all the benefit that he can receive from the use of tonics and hygienic measures, and these may accomplish something. In syphilitic cases I generally use Blanchard's pills, one t. i. d., and in many cases with considerable benefit. These patients may take a moderate amount of stimulus; must be kept well protected, and receive the best of care.

Under these circumstances they will get along very comfortably, and yet they find that they are all the while in danger of diarrhœa, suffer from headaches, etc. If the inflammatory form becomes engrafted upon this form it must be treated in the same manner as the uncomplicated inflammatory form.

In the case of the cirrhotic kidney curative treatment is also useless. The patient will receive scarcely any benefit from anything except tonics.

The administration of diuretics is hardly ever resorted to unless there is a complication by the occurrence of an inflammatory attack. This form of the disease is occasionally benefited by the administration of a hydragogue cathartic, where there is a distention of the abdomen. If the disease exists in connection with gout or rheumatism, the treatment for these diseases will be adopted. If the patient is anæmic, that condition must be treated, and in general, as I have said, tonics constitute the chief agents to be relied upon. Of all the tonics, I prefer strychnia. Iron may also be used, but strychnia and iron do much better than iron alone.

Thus, gentlemen, I have passed over some of the most prominent points in the pathology, clinical history, and treatment of the different forms of Bright's disease. I have only endeavored to set before you the prominent features of the disease, and must leave the interesting details of pathological, clinical, and therapeutical study to your own careful observations.

Original Communications.

URETHROTOMY:

INTERNAL INCISION COMBINED WITH EXTERNAL OR PERINEAL SECTION.

By F. N. OTIS, M.D.,

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SINCE the attention of the profession has been drawn to the value of the internal incision and divulsion of urethral strictures, by the plans and instruments of Maisonneuve, Thompson, Holt, Gouley, and especially since Maisonneuve's filiform, Gouley's fine whalebone guide, and my own dilating catheter, have been in use, few indeed are the strictures that cannot be successfully treated by gradual dilatation, by internal incision, or by divulsion. Occasional cases present, however, where, from the tortuous course or from the extreme tenuity of certain strictures, or from these causes combined, even the most ingenious, delicate, and skilfully adapted instruments cannot be passed through them into the bladder.

In such cases an external section of the stricture becomes an acknowledged and absolute necessity. The usual plan of operation,—when the external section of a stricture has been decided upon,—does not differ materially in the practice of skilful surgeons. Briefly, it is to cut down upon the sound or other instrument which has been previously introduced, through, or down, to the point of stricture, and then to *incise freely all stricture tissue*, until an instrument, sound, or catheter of the normal dimensions of the urethra can be readily passed through the urethra into the bladder. I have now to propose a modification of this plan of operation, which, from the fact that it aims to make the external perineal incision in great measure subsidiary to the operation of internal urethrotomy, or divulsion, may be found in certain cases to lessen the difficulties of the *perineal section without a guide*, and also to lessen the extent of the integumentary cicatrix, which may be held answerable to some degree for the usual subsequent reëntraction at the strictured point. The preliminary steps in the proposed operation are as if the ordinary external section were contemplated. An incision is made down upon the anterior face of the stricture, but aiming to enter the urethra by as small an opening as possible, and through this, as a new point of departure, endeavor to introduce a fine soft filiform or whalebone guide through the stricture. If the effort prove successful, when the main body of stricture is between the incision and the bladder, then to pass the opposite end

of the guide through the anterior portion of the urethra, screw on the shaft of a Maisonneuve, pass it down into the bladder, and operate by passing the blade down through the *superior* wall of the stricture, and thus into the bladder. If, on the contrary, the stricture has been exposed on its distal aspect, the mode of exploration is to be reversed, and on success in permeating it the internal operation performed in the same manner. In case of failure to pass the guide through the stricture by the incision, this is extended little by little, interrupted by frequent attempts to pass the stricture with the filiform or whalebone guide, until the stricture is just sufficiently incised to permit its easy transit. The following cases, extracted in full from the records of the Genito-Urinary Department of the Stranger's Hospital, will serve to illustrate the proposed method of procedure.

Case I.—*Organic Stricture of the Urethra.*—Service of Dr Otis, Stranger's Hospital. George H., æt. 44, married, Germany. Admitted March 19, 1872. Patient has been a perfectly well man up till 14 years ago. At that time he contracted gonorrhœa, which became chronic, and was in time associated with the symptoms of stricture of the urethra. For this he entered the New York Hospital, where he was treated by the method of gradual dilatation. Having learned to pass a No. 8 bougie on himself, he left the hospital, entirely relieved of his symptoms, and continued to do well for a number of years, passing from time to time an instrument as he was directed. On one occasion (about 5 years ago) he had some difficulty in introducing the bougie, and from that time abandoned its use. Soon, however, the old symptoms returned; micturition became painful, the stream grew smaller and smaller, and of late urine is voided by drops.

In addition to this trouble, patient has, during the past few years, suffered considerably from intermittent fever, during the attacks of which the difficulty of passing water has been extreme.

On admission:—Patient presents a well-marked malarial cachexia. No organic visceral lesions found. The urethra presents a very tight stricture about five inches from meatus. Urine is passed guttatim, or in a series of very small streams. An attempt made by Dr. Otis to enter the bladder with a fine whalebone bougie failed.

March 22.—Patient etherized and another attempt made, but with the same result.

March 23.—Had an attack of fever during the night. Ord. quin. sulph. gr. v. t. i. d.

March 28.—Again etherized and another attempt made with whalebone-guide bougies, some of them twisted at the end. Present, Drs. Markoe, Sands, Sabine, Weir, and others.

After a thorough and prolonged trial this procedure was discarded, and the patient put in position for lithotomy. A probe-pointed silver catheter having been passed down to the stricture, a small incision was made in the perineum down to the probe. This exposed the urethra for the distance of *a quarter of an inch* just at the beginning of the stricture, and this point was secured by two silk threads passed through the mucous membrane on either side of the incision. From this opening in the perineum efforts were now made to enter the bladder, which after a while, and not without difficulty, proved successful. A small filiform first entered, and the passage then enlarged by different dilating catheters (probe-pointed) up to No. 3 (1 mm. in diam.) This having been accomplished, a probe-pointed director was introduced into the bladder through the perineal opening, and the staff of Maisonneuve's urethrotome passed through the penis down to the stricture, then pushed onward to meet the director, and finally slipped along the latter into the bladder. The two blades of the instrument were *passed in succession* down through the stricture, dividing it superiorly. A large (No. 12) silver catheter was then introduced to be retained, cold-water dressing applied to the wound, and the operation was completed.

March 28, 6 P.M.—Patient rallied well from the ether. Ord. quin. sulph. gr. x. statim, and again at 9 P.M., together with suppositories of morphine (¼ gr.) p. r. n.

March 29.—No fever since operation; water passing freely from the catheter.

April 1.—Catheter removed. Some pain in chest. Ord. sinapism and dry cups to the chest. Slight constitutional disturbance.

April 2.—No fever. Wound doing well. Lateral decubitus directed. Ord. quiniæ sulph. gr. ij., t. i. d.

April 3.—Comfortable. Urine flowing less freely since change of position.

April 4.—Restless from pain in the wound. No. 8 sound passed. Sits up.

April 6.—No. 8 passed again.

April 8.—Patient able to walk about.

April 12.—Nos. 8, 9, and 10 sounds passed. Wound closing. Exuberant granulations touched with argenti nitr.

April 14.—No. 10 sound passed again.

April 16.—No water passed through the fistula for the first time to-day.

April 23.—Fistula healed.

April 24.—Patient went out on a pass and did not return. Discharged.

Case II.—*Organic Strictures with Perineal Fistulæ.* B. G. W., 44, New York. Married. Carpenter. Admitted April 25, 1872. Patient had one attack of gonorrhœa eighteen years ago, followed by a stricture which gave him no trouble until eight years since, when he fell some eight or ten feet astride some floor timbers, and "felt something give way." Experienced great pain and smarting when urinating, with soreness in the urethra. Urine contained pus, and on two occasions noticed blood in it; from this time the stricture became smaller. Two years after the accident an abscess formed in the scrotum on the anterior portion and right side of the median line which broke and discharged pus and urine; in about three weeks it healed, but reappeared. Last winter first had an attack of retention of urine, which was relieved by the catheter. A week or two afterwards another abscess formed at the junction of the perineum and scrotum on the left side of the median line, which also discharged urine and pus; this has never healed.

Two years ago commenced to take morphine by the advice of a physician, and has continued its habitual use ever since; states that he is accustomed to divide a drachm bottle of morph. sulph. into six parts, and take one of them daily, one-half in the forenoon and the remainder in the afternoon. On admission patient pale and unhealthy looking; complains of great pain and smarting during micturition; passes most of urine through fistulæ; has hypospadias; two fistulæ mark the location of the former abscesses; palpable induration throughout most of scrotum.

April 26.—Meatus incised by Civiale's instrument; bladder cannot be entered by the finest filiform bougie, but a very fine whalebone bougie passed in; stop morphine and substitute tr. hyoscyami ʒi. every hour until easier.

April 28.—No morphine to-day; guide bougie again

passed; slept only after repeated doses of tr. hyoscyamus.

April 29.—Very tremulous; "has hot flashes all over;" nervous system much relaxed; order strong coffee, Oj., and ¼ gr. morph.; appetite better; reports more difficulty in passing water.

April 30.—Sleepless from want of morphine; passed water guttatim mainly through urethra; repeat coffee and ¼ gr. morphine.

May 2.—Crying for morphine; nervous system less relaxed; slept a little after repeated doses of chloral hydrate and bromid. potass.

May 3.—This morning has convulsive startings; is in great distress for morphine; gr. i. administered with great relief; an attempt to pass an instrument was made, with the intention to operate, but as nothing larger than the whalebone guide bougie would pass, the operation was postponed; ¼ gr. morph. given.

May 9.—Comfortable on ¼ gr. morph. daily; since last date no urine has passed through the ant. fistula, and only a little pus; passes urine equally through posterior fistula and urethra; considerable pus and ropy mucus in vessel.

May 11.—Takes about ℥ vi. whiskey daily.

May 13.—Operated on by Dr. Otis. Present Drs. Willard Parker, G. A. Peters, Curtis, Dr. Bond, of Keokuk, and others. A fine whalebone guide bougie ½ millimetre in diameter was introduced into the bladder, and over it a small dilating catheter passed down the urethra to the anterior stricture (about 4 inches from the meatus), which was so small as to arrest its further progress. After several fruitless attempts to pass Gouley's and other instruments, patient was etherized and put in position for lithotomy. Perineal section was then performed, the whalebone bougie acting as a guide; several vessels tied and twisted; bladder was entered by a No. 11 bougie, which was retained there during the rest of the operation. Dr. Otis' dilating catheter was then passed from the incision through a long, close stricture to the meatus, followed by the larger size, and an attempt made to follow it up with the staff of Maisonneuve's instrument, which would not run upon the whalebone. A filiform bougie was then passed from the meatus alongside the whalebone, the point emerging at the incision in the perinæum, the staff of Maisonneuve's instrument screwed on and passed down, the blade being pushed through the stricture, which yielded slowly and with so much difficulty that the handle of the blade was twice bent at a right angle before the stricture was divided. The extent of the stricture was three inches; to further dilate the urethra Voillemier's rupture instrument was used; this was followed by considerable hemorrhage, promptly checked, however, by a No. 11 French bougie passed from the meatus and emerging at the wound in the perinæum. Operation lasted about two hours; patient put to bed, ¼ gr. morph. in suppository, and quinine gr. v. given; cold application to penis and poultice to abdomen. At 8:45 P.M., after urinating, patient had a chill; T. 102.2°, P. 118, R. 28; bougie removed; whiskey ℥ ss. and morph. sulph. ¼ gr. administered, and heat to feet. 11 P. M., temp. rising, and ¼ gr. morph. p. r. n.

May 22.—Rested some after 2 A.M.; feels comfortable; water passing freely through the incision.

May 23.—Some pain in scrotum and perinæum; bowels opened.

May 24.—Some chilliness during the forenoon; some water passing through urethra; considerable constitutional disturbance; inflammatory œdema in scrotum; relieved by poultices and suspensory bandages, and quinine gr. v. q. 4 hr., and morph. p. r. n.

May 25.—Scrotum about the same; water passes through penis and incision; some diarrhœa; liq. opii comp. substituted for morphine.

May 29.—No. 6 French bougie passed into bladder, followed by No. 10; œdema in scrotum subsiding; continued quinine and morphine.

June 1.—No. 10 bougie passed again; patient comfortable.

June 2.—Patient up and about; takes from 1½ to 2 grs. morphine daily.

June 4.—No. 11 bougie passed easily into bladder.

June 5.—Almost all the urine passes through penis.

June 6.—No. 12 steel sound passed; patient taught to pass the sound, and on the 18th discharged cured.

NEW YORK, March 26, 1873.

Reports of Hospitals.

CHARITY HOSPITAL, N. Y.

NOTES OF TREATMENT AND PECULIARITIES IN PRACTICE.

FROST-BITE.

THERE was one case of frost-bite which involved the phalanges of both feet. They were being dressed with carbolic applications, waiting for spontaneous amputation to proceed a little further, when the bones would be removed, and the stump allowed to heal by granulation, perhaps assisted by the *grafting* process.

ULCERS.

We were present on one of the days which may be called a "field day" in the ulcer ward.

A general principle of treatment adopted in every case, with a single exception, that day, was that of strapping with adhesive plaster and using a firm roller bandage. Each ulcer was snugly strapped with either transverse or basket strapping, and the limb firmly bandaged.

The dressing for the ulcers was varied according to the requirements of each case, certain appearances indicating the use of certain applications. Some experience is requisite to recognize the exact condition requiring the use of a certain remedy which, if properly applied—applied in strict conformity to the indication—renders the general treatment much more satisfactory.

Examples of specific ulcers are somewhat numerous here. One was dressed with iodoform and glycerine (sat. sol.) before applying the straps. It required a little stimulating.

For all these cases of gangrenous and sloughing ulcers either a saturated solution of carbolic acid is used, or a solution of bromine, grs. xvi. to the ounce of water.

The bromine is the more common application, and it most admirably rids the surface of that sloughy, nasty condition invariably present in such cases.

Traumatic ulcers generally receive the extra attention of scraping epidermal scales from the leg with a pocket-knife and spreading them over the surface of the ulcer. Since this has been practised, the ulcer has healed much more rapidly than before, with no different treatment otherwise. Over these scales was placed a dressing of balsam of Peru, and over this the straps and bandage as usual. Covering the surface of the ulcer with a coating of balsam of Peru is the ordinary method of dressing all ulcers that require no special application, and it is quite generally

used in connection with the special application. For example, balsam of Peru and iodoform (in powder) act together better than either alone. One is soothing and the other stimulating, and the joint benefit received from the combination is much greater than that received from either alone. When ulcers are covered with exuberant granulation, the solid stick of nitrate of silver is applied, and over this the ordinary dressing.

Ulcers with thickened edges are reduced by freely cutting through the indurated mass in transverse incisions throughout the entire circumference of the ulcer.

The treatment of varicose ulcers forms no exception to the general rule.

A man who had both legs covered with ulcers, from half an inch to an inch in diameter, resulting from hard service and low salt diet at sea, received the iodoform dressing, the ulcers being neither strapped nor bandaged.

An old man in bed with an ulcer involving about two-thirds of the circumference of his leg, which had been in an extremely sluggish condition, now exhibits a lively growth of healthy looking granulations all over its surface, which had been established within three or four days by the use of the following:

℞	Flour	℥ iv.
	Gum tragacanth	℥ ss.
	Gum arabic	℥ j.
	Egg, No.	i.
	Chalk	ʒ iij.

Make a paste by adding boiling water, and while fresh place it on the ulcer with a brush, four times a day. When the material sours it must be changed.

One great advantage derived from this general plan of treatment by strapping and bandaging is, that the patient can go about without detriment to the ulcer.

SPRAINS.

Some of these cases are treated by the application of a roller-bandage firmly applied; some particularly old cases, by a local wash of arnica, and some by the use of the immovable apparatus, and that usually employed here is the starch bandage. Rest is a great desideratum, and if the rest which the patient can give to the limb by simply being in a hospital is seconded by the local application of arnica, a marked improvement is soon seen.

BURNS.

The chief agents employed in the treatment of this class of difficulties in this hospital, are the carbolic salve and Carron oil.

℞	Lime water	℥ viij.
	Flaxseed oil	vij.

In some cases a little turpentine is added to the Carron oil.

CHRONIC SYNOVITIS.

The application of Sayre's splint is a very common method of treatment.

This splint and the advantages derived from its use are too well known to the profession to require any special description or comment.

One case was doing exceedingly well under the influence of the sponge treatment, which consists in binding wet sponges about the joints (in this case the knee-joint) and renewing their application every day. Wet the sponges in hot water.

Progress of Medical Science.

THE MAGNESITE DRESSING.—Kuester, of Berlin, has employed this form of dressing for two years, and believes that in many cases it is superior to plaster of Paris. Magnesite is easily procured, as it is extensively employed by the manufacturers of artificial carbonic acid waters. It consists, in fact, of the neutral carbonate of magnesia, from which free carbonic acid is readily obtained by the addition of any strong acid. To one part of magnesite he adds three parts of soluble glass, which is composed of the silicate of soda and potash. Both are then mixed into a thin paste. The silicic acid unites with the magnesia, and carbonate of potash and soda are separated.

It is used in about the same way as the ordinary plaster of Paris dressing. The author usually first protects the part with flannel, and then takes linen bandages, soaks them thoroughly in the paste and applies them firmly. Two, or at most three, layers are all that are requisite. The parts must then be kept immovable from 24 to 36 hours, and the dressing will become as hard and unyielding as stone. Lightness, cheapness, and greater durability are some of the most prominent advantages claimed for this method. The author believes that it is far superior to plaster of Paris in certain cases, as in the treatment of chronic inflammations of the shoulder, knee, and ankle joints, in contractures of the knee, and in imperfectly united fracture of the femur.—*Deutsche Klin.*, 12, 1873.

MICROCOCCI AND THEIR RELATION TO THE CAUSE OF DISEASE.—Professor Klebs, of Wurtzburg, has recently made some very valuable contributions to this subject, which has attracted so much attention during the last few years. Both he and Recklinghausen, and afterwards Waldeyer and many others, have demonstrated Bacteria and Micrococci in the so-called pyæmic affections. While these observers have been chiefly occupied with these organisms in metastatic abscesses, he has forced them, step by step, from the diseased surface into the substance of the tissues, and concludes that they are developed and increased before the collections of pus are formed. In the year 1871 he was convinced, from the reports on the Rinderpest and Smallpox, that these bodies were unlike the normal constituents of the body, and in each one of the diseases had a peculiar distribution and arrangement. The question for solution thus was, whether these bodies were normally present in the body, and whether they are to be regarded as parasitic organisms. The first question has been satisfactorily answered by careful examination of the blood. To determine the second and more important one required, first, the absolute demonstrations of these bodies, and secondly, some way of cultivating them, by which this development should be favored, all impure matters excluded, and the process followed under a high magnifying power. To accomplish this object he employed a method which he calls fractional culture. Taking the diseased organ he pressed out the fluids, and filtered them, by means of Bunsen's air-pump. The residue was then washed with distilled water until all of the soluble portions were removed. It now consisted almost entirely of Micrococci, with only a few elements of the tissues, such as nuclei and elastic fibres. Of this a very small portion was removed by means of a capillary tube and placed to a 2 per cent. solution of the acetate of ammonia, which was boiled and put away in a stoppered bottle.

After the development of the micrococci was completed, a small portion was placed in a second bottle, and of this still other portions were placed in a third and fourth bottle. By this means it was intended to eliminate those substances which were only present in small quantity in the first fluid, and this was shown by microscopic examination to be the case.

The second requirement was filled by placing the cultivated germs in microscopical glass chambers, which were then hermetically closed. To promote the process of cultivation, gelatine was previously placed in the chambers. It fixes the little particles in and on itself, and exposes them to view for a long time. The most valuable result of this experiment was, that the micrococci which were found in the different diseases showed different and characteristic methods of development, and that, accordingly, a specific disease may be due to specifically different organisms.

The artificial production of any of these diseases has only been successful in the case of the septic micrococci. The following description is given of changes which these bodies exhibit during their development:

1. The septic micrococcus first forms balls of granules on the layer of gelatine, where it is exposed to the air; then the greater number form colonies of bacteria and a lesser number are converted into contractile plasmic balls of a yellow color. The gelatine apparently undergoes no change. If the air is withdrawn, the development very soon stops, the contractile bodies are not formed, and the balls of granules assume a uniform brown color.

2. The diphtheritic micrococcus forms brown balls of granules at once, and they constitute large cohesive conglomerates if gelatine be present in large quantity. Smaller portions then separate from these masses, and grow to the size of the red blood corpuscles; at first they are homogeneous, but at length become granular, just as the first do. Finally the whole mass breaks up into free granules and very active little bacteria, and the gelatine becomes entirely fluid.

3. The micrococcus of measles was taken from the trachea and the blood in the heart of children. The blood was taken up in flat capillary tubes and commenced to develop balls of micrococci out of unseen elements. First of all there appeared pale collections of micrococci in the glass chambers, and they rapidly changed into active bacteria. These latter migrated rapidly to the periphery, where they formed a narrow closed zone which can only be compared with a band of little rods. From these new collections of moving bacteria originated, but their subsequent relations could not be observed, as they did not seem to maintain any regular order.

4. Vaccine virus was next examined in a similar way. The elements in this case arranged themselves like the sarcinæ, in fours. Their size was hardly greater than the ordinary micrococci.

Prof. Klebs believes that these facts will suffice at present to give a real scientific basis to the theory, that the infectious diseases possess specific germs which are endowed with vital capacities of their own.

Wounds of the External Genital Organs.—Two interesting cases of wounds of the external genital organs, in females, are mentioned by Dr. T. Parvin, of Indianapolis, Ind. (*Am. Practitioner.*) As to the treatment of these wounds, he says that it is usually a fruitless waste of time to hunt, as advised by some of the old authorities, bleeding vessels for ligation or torsion, an unwise thing to empty out clots, a needless thing to rely on astringents or sutures; but a graduated compress and bandage are the simplest and most effective means in the vast majority of cases. The bladder should be emptied by the catheter twice in the twenty-four hours; and in any case where the hemorrhage has been severe, the patient should not be allowed to sit up within forty-eight hours, even for a few minutes.

The Employment of Pessaries.—John Lambert, M.D., Salem, N. Y. (*Journ. Gynæcological Soc.*), in a communication on "Uterine Displacements," says that the use of pessaries in these cases complicates treatment and hazards successful results. In a certain proportion of cases of uterine displacements, a comparatively small number of well-fitting pessaries, in the hands of intelligent and skilful gynæcologists, are essential to the cure of not only the mal-position, but also of the abnormal condition of the organ which accompanies it. A pessary of whatever kind, when employed for the mechanical support of the uterus, is a foreign body, liable to do serious and perhaps fatal mischief, and never should be placed in situ without great circumspection on the part of the physician. It has no miraculous power, and its potency for harm is very much underrated.

He is of the opinion that intra-uterine or stem pessaries should seldom be used. Of the various forms of intra-vaginal pessaries in use, he prefers and employs the closed lever made of hardened rubber, and the soft elastic ring made of delicate strips of fine whalebone, covered with pure rubber, made by Tiemann & Co.

Ligation of Right Carotid Artery.—Dr. Pigne, Dupuytren (*Pacific Med. Jour.*) exhibited to the San Francisco Medical Society a patient on whom he had successfully performed the ligation of right carotid artery for aneurism. The ligature came away on the seventeenth day. In five months the tumor had entirely disappeared.

Excision of Superior Maxillary.—John P. Wall, M.D., of Tampa, Florida (*Atlanta Med. & Surg. Jour.*), records a case of excision of the superior maxillary bone, the patient being a female child of eight years. The chief interest of the case consisted in the absence of any kind of pain, the rapidity of the growth without known cause, and the rarity of such a diseased condition of this bone in children.

Treatment of Consumption at the Brompton Hospital.—T. G. Roddick, M.D., House Surgeon to Montreal Gen'l. Hosp'l., writing from London to the *Canada Medical and Surgical Journal*, says that two thousand gallons of cod-liver oil are consumed in that institution in a year. Lead, turpentine, and gallic acid are the sheet-anchors there in hæmoptysis. Although the physicians are beginning to use ergotine hypodermically with moderate success, they do not depend on the latter remedy in severe cases.

Chronic Eczema of the Extremities.—Dr. Mac Callum, of the Montreal Gen'l. Hosp'l. (*Canada Med. & Surg. Journ.*, Nov., 1872), successfully treated an obstinate case of this affection, the patient, male, being 42 years old, as follows: A solution of Potassa Caustica gr. v, to water ℥ ij, was used outwardly; being brushed lightly over the eruption once daily. The following mixture was ordered internally: R. Hydrarg. Bichlor. gr. iv; Liq. Arsenic. ♏xv; Acid Hydrochlor. dil. ʒ iss; Aquæ ad ℥ viij; M.—℥ ss, ter die.

Bromide of Potassium.—The subjoined conclusions concerning bromide of potassium are noted by M. Gonzales Echeverria, of New York (*Phila. Med*

Times), based on clinical facts: The remedy operates actively in a paralyzing manner on the excito-motor power of the sympathetic and spinal nervous system, and produces cerebral congestion. It is not a specific for epilepsy, but may contribute most efficiently to arrest the fits, by suspending reflex excitability of the spinal cord in a more uniform and active manner than any of its kindred salts. The benefits of the bromide of potassium increase and are better secured by administering it combined with conium, ergot, arsenic, and strychnia. Sixty grains is the average daily amount of bromide of potassium required in ordinary cases of epilepsy, but it is necessary to keep epileptics, at different intervals during the progress of their attacks, under the full physiological effects of the bromide, to suspend it until the bromism is dispelled, and then to resume the salt again in ordinary doses. It alone exerts little or no effect on the attacks of *petit mal*, unless associated with large doses of ergotine (gr. vi to gr. xvi) and conium. The remedy should never be discontinued suddenly, even when the epileptic fits have not recurred in a long time, but the dose of the salt should be gradually decreased, and the treatment left off insensibly, when there is every indication of the complete eradication of the epileptic habit. Nothing proves that the efficacy of the bromide of potassium in epilepsy bears any relation to the existence or severity of the bromide eruption. Arsenic prevents or mitigates it, and acts further as a valuable tonic. Coffee is one of the best means of correcting the unpleasant action of full doses of the bromide. When it is taken by the mother in large and prolonged doses, it does not seem to have any noxious influence on the fœtus.

ARTICLES IN OUR EXCHANGES.

SURGERY.

Direct transfusion of blood. BOMBA. *La Nuov. Lig. Med.*, Jan. 20, 1873.

Large umbilical papilloma removed by cauterization. RIZZOLI. *Ibid.*

Tracheotomy and a new Tracheotome. OLIVETT. *Ibid.*

Pathological changes in the muscles of the ano-perineal region in anal atresia and recto-vaginal fistula. RIZZOLI, F. *Ibid.*, Feb. 20, 1873.

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THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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

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MEDICAL EXAMINATIONS FOR LIFE-INSURANCE.

In the present issue we commence the monthly publication of articles which shall be of special and practical interest to every medical man who may be called upon to make examinations for life-insurance. The importance of being able to make such examinations properly cannot be overestimated, and no means within the reach of the medical examiners on the one hand, and the life-insurance companies on the other, should be neglected to found the system upon a thoroughly intelligible and scientific basis.

Many life-insurance companies imagine that they sufficiently protect themselves against the ordinary mistakes of their medical examiners by issuing a few-paged pamphlet of instructions. Many of these are very carefully drawn up by the medical director of the home office, being the results of his personal experience only in the management of his department. As a rule, these items of instruction are condensed to the smallest possible space, and give no more idea of the reasons for a decision by the parties for whom they are intended than does an ordinary time-table give the traveller a satisfactory knowledge of the country through which he is passing. This has become a necessity created by the life-insurance companies, who take a merely business view of the subject, and who imagine that the nearer they can bring the whole matter of medical examination to a business system the better able will they be to draw the line between profit and loss. The truth is, as in many departments of science where a mere professional opinion is to be the basis of action, there are many matters to be taken into consideration which no set of rules, however carefully made, can directly reach.

Viewing the matter in its scientific aspect the conclusion is inevitable, that an opinion is valuable in proportion to the thoroughness of the study of those principles upon which such an opinion is founded. Such a study should be carried on for the sole purpose of arriving at the truth: questions should be viewed in every aspect, modifying conditions should be carefully considered, and controlling influences should be thoroughly understood. In no other way can the foundation for a sound, conservative, and comprehensive opinion be founded. We speak advisedly when we say that the great questions concerning the true interests of life-insurance in its medical aspects have never received the amount of attention which they deserve and demand, and that the consequence is that dreadful mistakes are constantly being made by medical examiners in accepting risks for their companies. In view of supplying this requisite knowledge to medical examiners throughout the country the medical directors of all the large insurance companies of this and neighboring cities have urged us to create a life-insurance department, which shall be especially devoted to the strictly scientific discussion of all questions bearing upon medical examinations. It is perhaps unnecessary to say that everything which has the appearance of advertising shall be rigidly excluded, and that the RECORD shall continue as ever to be a thoroughly independent, strictly scientific, and practical journal. Our aim has been and shall be to discuss principles only, weigh scientific evidence, and to consider all questions of practical import with the strictest impartiality. In our life-insurance department precisely the same course will be adopted and the interests of life-insurance companies as a body will alone be considered. By such a course the articles we propose to publish will have a general interest, each company through its medical department being free to make such application of the truths brought out as the particular requirements of its business arrangements may suggest. Whatever application may be made of the principles by different companies, one thing is evident, that the general standard of medical examinations must necessarily be raised, and each examiner will be stimulated to renewed care and watchfulness in the selection of risks.

The necessity of the adoption of some general standard for opinion in medical examinations is painfully apparent in the want of a recognized scientific basis upon which to act. It is true, every examiner is entitled to an opinion, but an opinion as to a life-insurance risk is quite different from what it should be under ordinary circumstances. These opinions must vary in accordance with the appreciation of the fundamental truths which should guide them. It is notorious how differently equally good examiners estimate an applicant for life-insurance. One will reject him altogether, another will hesitatingly accept him, while a third will consider him a good risk. One

attaches but little weight to the family history, while another believes it to be his duty to reject the apparently healthiest applicant whose history is tainted with some hereditary disease. Similar differences of opinion prevail in regard to the importance to be attached to excessive or too light weight, to personal habits, to the diseases which the applicant has had, and to many other points not necessary to mention in detail. All this is due to the want of a greater uniformity in the estimation of these different questions. As our columns will be open to the supporters of both sides of all such questions, it is to be hoped that some general opinion, founded upon scientific data, may be created which shall enable the doubtful to be certain, the wavering to be more decided, and the incompetent to be safe. In this connection we would state our purpose to publish the mortuary experience of some of our older companies, who have very kindly placed their records at our disposal. These tables will be so arranged as to show how great the hereditary influences have been upon the losses of the companies, what influences certain diseases have had upon the longevity of applicants; also the influences of occupation, etc. These facts have never been published by any of our insurance companies; their value, however, as a guide to the selection of risks can hardly be overestimated.

Again: Medical examinations for life-insurance is a specialty, and, in view of its importance, should be cultivated as such. No point, however minute, should escape attention, and no opportunity should be lost to add to the stock of special knowledge upon the subject. A scientific journal is the legitimate channel for such information, affording, as it does, a ready medium for the interchange of opinion and the prompt publication of important facts. In a word, medical examiners need a current literature and an abundance of material for study.

The department of Life-insurance is to appear extra of our usual amount of reading matter, and is to be under the charge of a gentleman who is connected with one of the life-insurance companies of this city, and is, in our judgment, thoroughly competent to select such articles as may be of interest and value to the medical directors and examiners.

The addition of such a department involves, of course, an increased outlay of capital, but we are happy to say that the larger companies of this and neighboring cities, appreciating its value, have liberally subscribed to the RECORD, and have directed it sent to their examiners throughout the country. In a purely business aspect the education of their examiners will be no doubt an immense saving in insuring nothing but good and thoroughly trustworthy risks. They will recognize the possibility, by the publication of suitable articles, of creating a judicious watchfulness on the part of their examiners. Without doubt this will be the effect, and, if it be true of a single examiner of the thousands to whom this journal may be sent, the saving to companies, in the avoidance of even a single large and bad risk, will more than compensate them for any outlay which they have incurred.

In conclusion, we would state that our desire is to make this department creditable to the RECORD, and to that end we shall be ever ready to listen to suggestions for improvement from all those whose position, experience, and education entitle their opinions to respect.

THE SUPPRESSION OF PROSTITUTION.

To such as are sanguine of the good effects of legislation in the suppression of prostitution, the Eleventh Annual Report of the Police Commissioners of St. Louis, Mo., will afford much encouragement and comfort. The triumphs of the system seem to be quite complete, and it would appear that we shall soon be ready to solve the problem which has perplexed the socialist from the time that civilization itself had an existence. We are not inclined to underrate the efforts of the good men of St. Louis, in their attempts to bring about a much needed reform, but simply to call attention to the possibility that their enthusiasm has led them into the temptation of striving to prove too much.

We are informed that the moral effects of the law are:—

1st. The number of public women has uniformly decreased each year. 2d. They are more decorous in their manner in public, and the plying of their wicked trade upon the public streets has been almost entirely discontinued. 3d. That a considerable number of abandoned women have been reclaimed and restored to respectable life, and, in several cases, married. 4th. Clandestine, or private prostitution, has been materially checked, through fear of the legal consequences of such indulgence, when brought home to the offender; and that juvenile prostitution has been greatly diminished, if not wholly removed.

The system of registration, as adopted by the Board, is perhaps as perfect as any such can be made in a republican form of government, but that it is not absolutely so no one who examines the details of its operations can deny. This being the case, the registration cannot be complete—cannot give anything more than an approximative result. This has been proved to be the case in Paris and Copenhagen, where the registration was intended to be as compulsory as the most stringent enactments could make it. Notwithstanding every precaution was taken by a police whose vigilance is traditional, the mortifying acknowledgment was made that the figures fell far short of a correct representation of the actual number of courtezans in the active exercise of their trade. It can hardly be expected that even the police bureau of St. Louis can do better, and yet we are informed upon the seemingly stubborn authority of an array of figures, that the number of these public women has steadily decreased from year to year. This may be probable, but hardly possi-

ble. There is a more rational method of explaining this decrease in the figures than by the supposition that the operation of the law is a success. In the first place, we maintain that no law can ever be made that will make it impossible of evasion, and there will always be some who will evade it, do what we may to prevent them. The majority of criminals, it is true, will at first be overawed with the prospect of penalties, and will from very fear compel themselves to abide by its provisions. This can be assumed in the present instance, at least, to be one of the reasons why the registration was at first comparatively complete. After a while, however, a certain proportion grow defiant, and boldly ignore law. As a result, the number registered may be less, while in reality the actual number who should be registered may be the same. This is the case with every enactment which appears to the parties directly interested to be calculated to restrict what they may be pleased to call their individual liberties.

Among the results of the St. Louis law, we read that the conduct of these courtezans is more decorous in public; in fact, that the "plying of their wicked trade" on the public streets has almost entirely discontinued. These assertions can be more reasonably accepted as facts, inasmuch as there is not much chance to escape direct punishment for the open violations of ordinances which the authorities take a special pride in enforcing. This is, perhaps, the smallest return the suspected ones can make for the tacit toleration of their crimes in private.

We are also ready to admit that a considerable number of abandoned women eventually take a turn for the better; that many cease to follow a shameful career and lead respectable lives, and that not a small proportion get married. But we see no special reason why the operation of any law can bring about such results. On the contrary, the very perversity of human nature is such, that actual legal compulsion to perform a strictly moral obligation would be not only entirely barren of good results, but would stimulate the otherwise rightly disposed to rebel against their better inclinations. The carefully collated statistics of *Le Bureau des Mœurs*, the department having sole charge of the Parisian prostitutes, show that the whole number of these abandoned women change every four years. This period is named by authorities as the average duration of the life of a prostitute. A certain proportion of these unfortunates die, but a very large majority of their own accord become respectable, and not a few, as we have before intimated, marry. In other countries, Great Britain for instance, this period is longer, averaging between five and six years, but the ultimate results are much the same. Parent Duchatelet asserts that the greater majority reform at the end of the first year.

It is equally preposterous to suppose that any law can have any direct effect in checking clandestine prostitution. Far from so doing, it is apt to increase it, for reasons which are at once obvious to all who have given attention to the subject. This was actually proved to be the case in Paris, and was believed to be in direct proportion to the rigorous enforcement of the prostitution laws.

The system of licensing houses of public prostitution is a good one, so far as it goes, and the use of the money thus obtained in establishing a hospital and reformatory school, as is being done in St. Louis, gives the law a truly practical turn. While the law may do very little towards checking prostitution it certainly can do the next best thing in mitigating the effects of the vice. It is well known that courtezans are especially prone to contract venereal disease, and a hospital devoted to its treatment is a necessity in every community. Not less so is a reformatory school, where the repentants, who are always in a large majority, can be aided in their efforts to become respectable, and have that charity shown them which they are made to believe they can never expect from even a Christian community.

If for no other reasons, the citizens of St. Louis deserve the thanks of humanity. Already their so-called "Social Evil Hospital" is in progress, forty thousand of the eighty thousand collected by their license system having thus far been expended in its construction. If such a practical result can crown their good intentions, every large city would do well to follow their example.

OUR ALUMNI ASSOCIATIONS.

A SHORT time since, in speaking of the amount of good which Alumni Associations could accomplish, we alluded to the establishment of extra professorships. We are happy to state, that such a suggestion has already taken a practical turn with the Alumni of the College of Physicians and Surgeons, who have declared their intention of raising one hundred thousand dollars for the permanent endowment of a Chair of Pathological Anatomy, and the establishment of working laboratories for the students. Let us hope that our sister organizations in this and other cities will take the lesson to heart

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Reviews and Notices of Books.

A TREATISE ON APOPLEXY. By JOHN A. LEDELL, A.M., M.D., ex-Professor of Anatomy at the National Medical College, Washington, D. C. New York: Wm. Wood & Co. 1873.

THIS volume is an admirable specimen of the best kind of American medical literature, for it has both the distinguishing virtues and the defects of the class.

It is sufficiently comprehensive in its conception, clear and practical in its execution; the most important points are placed in just relief, and a large amount of almost new information is conveyed in so agreeable a

style, that it is easy for the reader to forget that he is learning anything. On the other hand, little or none of this newest information is derived from original researches of the author, whose erudition even, to judge by the bibliographical references, is rather commonplace. These references are made far too largely to text and compendiums, such as the Sydenham Year Book and Retrospect. All the necessary information seems to have been collected, but we rather miss the traces of minute and laborious investigation, either literary or experimental, which characterize the works of continental writers. On the other hand the author's clinical experience has been well handled, and the contributions from it are carefully analyzed, and constitute a valuable feature of the book.

The new definition of the term apoplexy, so much needed, is given with great clearness in the first chapter. "Apoplexy is a disease of the brain, characterized by sudden abolition of consciousness, feeling, and voluntary motion, produced, not by injury nor poison, nor heat, but by some morbid action in the brain itself." * * "It is not synonymous with cerebral hemorrhage. * * which indeed is comparatively seldom attended by the phenomena of apoplexy." This affirmation is based upon the author's experience, is supported also by the authority of Rousseau and of Abercrombie. "Apoplexy frequently results from sudden hyperæmia. * * or from cerebral anæmia — the consequence of an embolus of a large artery, or of sudden violent emotion; or from a profuse effusion of serum, and œdema of substance of brain." The author enumerates five distinct forms of apoplexy, or rather four pathological conditions that may be attended by the apoplectiform ictus; namely, hyperæmia of brain or membranes, serous effusion, hemorrhage, embolism, and finally embraces, under the name of nervous apoplexy, those cases in which death has occurred amidst all the phenomena of the apoplectic ictus, while however no serious cerebral lesions have been discoverable at the post mortem. But the ultimate effect of these different conditions, or the pathogeny of the apoplectic stroke, is, according to the author, always the same, namely, production of sudden cerebral anæmia. This is the famous explanation given by Niemeyer, who claims that in congestion of the brain the distention of the veins prevents an influx of arterial blood into the capillaries; that in œdema, whether depending on congestion or on Bright's disease, the capillaries are compressed by the fluid, and in hemorrhage, tumor, or abscess, that they are again compressed on account of the encroachment made on the limited intra-cranial space. "Capillary hemorrhage produces no apoplexy. The anæmia resulting from cerebral embolism 'admits of no room for doubt,' and nervous apoplexy is in all probability an intense form of cerebral anæmia, suddenly produced by spasmodic contraction of the cerebral arteries."

The author corroborates Niemeyer's views by his own direct observations of extreme anæmia of the brain on the living subject, occurring in consequence of fracture of the skull.

The author justly remarks that the causation of apoplexy is quite complex, since various influences may coincide and combine to deprive the nerve-cells of their nutrient blood. Some interesting statistics of age are given, by which it is shown that the proportion of deaths from apoplexy among children is much larger than is generally supposed. In New York, from 1867 to 1869, 68 children under ten years of age died of apoplexy, and among these 43 were less than a year old. "Scarcely any year of life is more liable to the disease than the first one." It is this fact that has led the writer to devote a special chapter to infantile apoplexy. The prevalence of the disease is explained by the soft texture of the brain during infancy, affording less support to the blood-vessels; by the flexibility of the sutures and fontanelles, which on the one hand favors the engorgement of cerebral vessels whenever hyperæmia occurs, and on the other permits atmospheric pressure to aggravate the anæmia that may have been originally occasioned by any causes of general debility; finally, by the fact that œdema of the brain substance occurs more readily in these young subjects than in adults. The intense nutritive activity of the brain in young subjects is also a predisposing cause, as for all cerebral affections. Several very interesting cases are related of apoplectic coma, as a fatal termination to marasmus, and to acute diarrhœa. Cerebral hemorrhage especially affects cachectic children, and is remarkable for the fact that it occurs in the cavity of the arachnoid much more frequently than in the substance of the brain; the reverse is the case with adults. No explanation is offered of this circumstance. In the chapter on adult cerebral hemorrhage, the description of preliminary symptoms is mainly borrowed from Forbes Winslow, and the frequent references to the work of this well-known writer are rather tedious. The interesting question of the localization of the lesion of aphasia is too summarily disposed of by a quotation from Hammond's "Treatise on Nervous Diseases." Hemiplegia, although the most characteristic symptom of cerebral hemorrhage, has been observed in congestion, syphilis, and rheumatism, and is well known to be caused by embolism. The opinions of Charcot and Vulpian in regard to the dependence of hæmatoma of the dura mater upon a pachymeningitis are unqualifiedly accepted.

A special chapter is devoted to cerebral rheumatism, of which six distinct forms are described: 1st, apoplectic and apoplectiform; 2d, paralytic; 3d psychical, or that which has mental alienation for its essential feature; 4th, convulsive; 5th, choreic; 6th, meningitic, with meningeal inflammation.

The apoplectic form is generally due to cerebral embolism, but sometimes is not attended by any lesion, and this is always the case with the apoplectiform variety. So the paralytic form is found sometimes with, sometimes without a lesion. But the psychical, convulsive and choreic forms leave no anatomical trace behind them, and "cerebral rheumatism is thus for the most part a neurosis depending on vitiated blood, and not an inflammation." The same pathogeny is accepted for cerebral gout.

The section on treatment is of more importance in this than in the other chapters, for much more may be done. The author insists on the excessive rise of temperature that has been observed in nearly all cases of dangerous cerebral rheumatism, and considers the reduction of temperature to be the first indication. The wet pack, in bag, veratrum viride and sulphate of quinine, are the means chiefly recommended to meet this indication.

Among the most novel suggestions for the treatment of apoplexy, is the employment of arsenious acid as a specific in the preliminary cerebral congestion. This suggestion is borrowed from Lamare Picquot, and from Lüsle, director of the Marseilles Lunatic Asylum. The dose is the one-fifth of a grain three times a day. Belladonna or atropine, one-sixtieth grain, is recommended by the author when apoplexy is threatened in the course of Bright's disease. It is claimed to be a remedy for renal congestions. But we believe that the diuresis that is indeed an effect of atropine, is not a

proof of lessened congestion, but of stimulation to the secretory functions of the kidney by the rapid elimination of the alkaloid.

The last chapter in the book is appropriate to the times: it is devoted to epidemic cerebro-spinal meningitis. The observations upon which this chapter is based have been largely drawn from the New York epidemic of 1872.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 12, 1873.

DR. ERSKINE MASON, PRESIDENT, in the Chair.

TRAUMATIC STRICTURE—DIVULSION—SUDDEN DEATH FROM URÆMIA.

DR. E. L. KEYES presented the kidneys, ureters and bladder of a patient who had died thirty-four hours after internal urethrotomy. The case being of interest, Dr. Keyes detailed it at length. In May, 1871, the patient, a large, finely-built fellow, aged 22, came from out of town for relief of stricture. He urinated with great pain in a dribbling manner every three hours by day and two or three times nightly. The fluid was muddy with blood and pus. When examined it was found to be neutral, full of pus and blood, with not more albumen than the blood would account for. No casts were found.

Examination revealed a perfectly healthy urethra, without stricture or band of any sort for four and a half inches. The canal however was very hyperæsthetic. The size of the meatus was 15. Beyond 4½ inches, only a Benas filiform bougie would penetrate, and this was tightly grasped on withdrawal.

The patient ascribed his stricture to a gonorrhœa which he had acquired in July, 1869, before which date he had had no venereal disease nor any urethral trouble of which he was sensible. In July, 1870, one year after his gonorrhœa, he had retention. A surgeon to whom he applied broke a silver catheter in attempts at forced catheterism, but succeeded in forcing another silver instrument (No. 7) through the stricture. A good deal of blood was lost, but the retention was relieved. Upon cross-questioning it came out that the patient had fallen across a fence, upon which he was walking, at the age of six. Both testicles swelled at the time, but the patient does not remember that instruments were used to relieve his bladder nor that he passed blood by the urethra. Dr. Keyes believed the stricture to be traumatic in its origin, because it had proved so tough, so tight and so resisting at the end of one year from gonorrhœa, and because there were no evidences of structural lesions of the urethra forward of 4½ inches.

After the first instrument was passed in July, 1870, the patient had what he called "severe intermittent fever," which set in the next day, and lasted three months. Between July, 1870, and May, 1871, attempts at catheterization had been made about twelve times, the instrument sometimes going into the bladder, but usually failing to pass the stricture. Every attempt to use instruments had been invariably followed by chill and fever (urethral fever).

After the passage of the Benas bougie by Dr. Keyes, the patient had several slight chills and almost complete retention. These passed off, and on the fourth day, the patient being in bed, divulsion of the stricture, to size 20 (Eng.), was performed, with Sir Henry Thomson's instrument upon a whalebone guide, without an anæsthetic. This was the first operation ever performed upon the patient's urethra not followed by a chill. No bad symptoms ensued. On the seventh day the patient passed 15 for himself, and left the city, carrying 12, 14, and 15 conical steel sounds with him, with proper instructions for their continuous use. Notwithstanding divulsion had been carried to 20, 15 was grasped by the stricture somewhat, showing that its fibres had not been efficiently torn. The patient declared that he had never passed such a stream of urine in his life, even before his gonorrhœa in 1869—this being another proof that his stricture antedated his urethral inflammation, and was due to his injury at the age of six.

In March, 1873, the patient again presented himself for treatment. He had continued to use his 15 without difficulty, and had prolonged the intervals of its insertion to one month up to the end of November, 1872, when he had contracted a new gonorrhœa. This prevented the use of the sound for three months, and on trying to pass twelve in February, it had penetrated the stricture with great pain and difficulty, and considerably aggravated the bladder-symptoms (frequency of urination, pain, &c.), which had come on again with his gonorrhœa. He had consequently omitted any further auto-manipulation and came to the city in March for relief, demanding a new operation, and absolutely refusing to stay in the city for more than a week. Examination showed the stricture to have recontracted to six, to be inflamed and exceedingly sensitive. The urine contained blood and pus, the bladder was in a peculiarly irritable condition, although the urine was still faintly acid. Internal urethrotomy was decided upon; 1st, because the stricture was inflamed, and so sensitive that it was doubted if instruments would be tolerated afterwards, so as to allow the patient to resume control over his urethra in a week's time. 2d, because previous divulsion to 20 (Eng.) had failed to relieve the strictured point sufficiently. 3d, because it was believed that a small incision through the stricture upon the stretch would accomplish more good with less violence.

No chill followed the introduction of No. 6 upon the date of the patient's re-application for treatment. He was instructed to take five grains of the sulphate of quinine and fifteen grains of the citrate of potash every eight hours. Twenty-four hours after the exploratory passage of No 6, the patient being in bed, without an anæsthetic, a cut not over a line in depth was made through the stricture, which had been previously accurately located by means of a small bulbous sound. Dr. Otis's divulsing urethrotome was used. A very slight quantity of blood followed the withdrawal of the instrument. Within half an hour a severe chill ensued, which lasted about two hours. Eight ounces of urine slightly tinged with blood were passed. Severe and protracted vomiting and purging accompanied the chill, with intense prostration, a pulse of collapse, small, soft, flickering, about 160 to the minute. Temperature slightly raised. Skin not dryer than normal. Seven drops of Magendie's solution of morphine were thrown under the skin of the arm, with the two-hundredth of a grain of sulphate of atropia. Within the next four hours the pulse came down to 120, but continued weak. Urine was twice passed, at first six ounces slightly bloody, then three ounces decidedly red with blood. The nausea disappeared, the patient took quinine, coffee and some alkali, stated that the pains in his head and bones, which had been severe since his chill, were lessening,

and that he thought he would sleep, it being after 9 P.M. The patient had never been conscious of any kidney disease nor had given any symptoms of any renal malady. He was left in charge of a nurse with instructions to administer two teaspoonfuls of liq. ammon. acetat. every two hours, and Dover's powder in case of restlessness. The latter was not given. Early on the following morning, when first seen, the patient presented alarming symptoms. He had not urinated since 9 P.M. of the previous day, and his bladder was empty. His whole surface was cyanosed, and he appeared stupefied, although perfectly intelligent. Pupils contracted. Severe pain in head. Pulse almost gone at the wrists. Dr. Markoe saw the patient in consultation, agreed that suppression with uræmia had occurred, and that the prospect was exceedingly gloomy. Six wet cups were applied over the kidneys, and eight ounces of blood drawn; hot-air bath was put into action and continued till death; one-quarter of a grain of elaterium was given by the mouth. A profuse watery stool occurred within three hours, and the skin became quite moist over the face, thighs and feet. One-twelfth of a grain of elaterium was ordered. Half-ounce doses of infusion of digitalis were given every two hours at the suggestion of Dr. Van Buren, who saw the patient in consultation. A little urine was passed with profuse watery stools during the afternoon, but the patient continued cyanosed and almost pulseless, getting gradually but steadily more stupefied. At 6 P.M. Dr. Loomis saw the patient, who was then nearly comatose and evidently dying. At his suggestion brandy was given by the mouth and by the rectum, but the latter was not retained, as the sphincter was paralyzed. After two hours the pulse rallied a little at the wrist, and gtt. x. Magendie were injected subcutaneously, followed by gr. x. quinine, also subcutaneously. Breathing became slightly stertorous after an hour, the patient became comatose and died quietly. Autopsy two and one-half hours after death, with the assistance of Dr. Lee. Rigor mortis marked. Surface mottled in purple. Permission was only given to open the abdomen. No mutilation was allowed. All the abdominal viscera were normal, except those belonging to the urinary tract. Spleen somewhat large and turgescent. The bladder was removed in front of the apex of the prostate and was taken out with the ureters and kidneys. The urethra behind the stricture was not dilated. The finger pushed forcibly into the urethra from the pelvis was arrested by the stricture. A steel sound (No. 7) passed readily through the latter, encountering the finger. The prostate was normal, its sinus congested. The bladder was immensely hypertrophied, its walls being about three-quarters of an inch thick. Trabeculæ of muscular tissue stood out under the mucous membrane, but there was no sacculation. The mucous membrane was turgid and covered with small ecchymoses. The right ureter was dilated to the size of the thumb, its walls were thickened, its mucous surface injected. The pelvis of the right kidney was in a similar condition, slightly dilated. The cortical and pyramidal portions of the kidney were atrophied partly, and there was marked evidence of localized fatty degeneration. The left ureter was as large as the small intestine, much thickened, with its mucous membrane much injected. It was absolutely occluded at one-half inch from its vesical orifice, so that fluid could not pass. It was distended with urine containing a little pus, not decomposed seemingly, and with no ammoniacal odor. The left kidney was decidedly atrophied, its pelvis largely dilated, and two small abscesses were found in the cortical substance of the organ. The whole substance of both kidneys was intensely gorged with blood.

In answer to a question from Dr. Keyes in reference to any influence which the existence of Bright's disease might have upon the operations upon the urethra, Dr. Mason remarked, that he had divulsed and cut strictures in several cases where renal trouble was unquestioned and without any bad results.

Dr. Keyes remarked that he had a somewhat similar experience, referring, in connection with the statement, to the case of a gentleman aged 70, who had had stricture for a great number of years, who was at the present time under treatment for the same, and who had had symptoms of Bright's disease for a very considerable period. After dilating the stricture at first with whalebone filiform bougies, and afterwards with soft instruments to the size of No. 3, an attempt was made to pass the next largest size, when it became arrested, necessitating the employment of a little force to effect its passage. This procedure was followed by a very little blood, an intense chill, and a distinct attack of urethral fever, but with no suppression. This confined him to his bed for a period of two weeks. Concluding finally to take the risk of divulsion, a Thompson's Divulsor was passed over a filiform bougie and the stricture divulsed to No. 6. No inconvenience whatever attended this operation, and the different sizes of bougies had been introduced, until, at the time of reporting the case, a No. 11 could be used.

Dr. Otis, in connection with the dependence of actual death from urethral fever and suppression upon injuries to the urethra, referred to two or three cases of the sort previously presented to the Society, *vide* Medical Record (Vol. VII. p. 158). He also alluded to another case, the particulars of which were sent to him by Dr. Done, of Yokohama, Japan. During the process of dilatation the patient was attacked with urethral fever, in consequence of a small amount of force being used, and died on the third day.

In all these cases the injury to the urethra seems to have been the starting-point, but the degree of injury, or the character of the instrument used, or the operation resorted to, seemed to have very little if any connection with the result that might obtain.

Dr. Jacobi agreed with Dr. Keyes in ascribing the death of his (Dr. K.'s) patient to uræmia. The explosion of the symptoms of uræmia after the operation was to be explained by the condition of the specimens. The patient had a bilateral nephritis, there was dilatation of both pelves, on the right side a considerable atrophy of the pelvic tissue, a few abscesses with very thick pyogenic walls, with the exudation of acute congestion, a pale condition of the organ, the result of a long-continued diffused inflammation.

The left kidney was in a better condition, but was far from being normal. In some places the border between the cortical and inner substance had almost disappeared.

The operation was just as legitimate under the circumstances as was death itself. In all probability the man must have died of the chill following the introduction of a catheter or sound. Very little is required when the kidneys are in that condition to start a train of symptoms which finally end in death. In regard to a previous knowledge of such a case there are many obstacles in the way, not the least of which are the absence of casts, albuminuria, and other usual signs of kidney disease. And even if the diagnosis had been made, the Dr. (K.) would have operated in spite of them.

Dr. Loomis stated that he had seen the patient during life, but his appearance was different from any that he had seen dying from uræmia. He

was inclined to believe that said symptoms resembled those described by Harley under the name of ammonæmia, in which the blood became poisoned by urine decomposing in some of the urinary cavities.

Dr. Mary C. Putnam remarked that the same idea was held by Professor Gosselin, of Paris, in explaining the sudden cause of death of a young girl after the extraction of a foreign body from her bladder.

Dr. Keyes asked if this patient had ammonæmia alone, why should he not have shown some trouble previously in connection with his former numerous chills?

Dr. Putnam. The pus decomposing in the pelvis of the kidney might cause it.

Dr. Keyes. This can hardly be allowed, inasmuch as we have numerous cases of such a sort where no such symptoms occur. Another fact in connection with the case was of importance, in regard to one of the assigned causes of this variety of nephritis on the propagation of the inflammation along the continuous surface of the mucous membrane. Although this might account for trouble in the right kidney, it could not have been explained on the ground of continuous mucous membrane on the left side.

The urine was faintly acid before the operation, and there was no ammoniacal odor about it at any time.

(To be continued.)

MEDICAL LIBRARY AND JOURNAL ASSOCIATION OF NEW YORK.

Stated Reunion, March 21, 1873.

Dr. John C. Peters, President, in the Chair.

PATHOLOGY AND TREATMENT OF PYREXIA.

Dr. W. H. Draper premised his remarks on "Pathology and Treatment of Pyrexia," by saying that he did not propose to offer an exhaustive essay on the subject, as accurate investigations had only just commenced.

He divided the signs of fever into objective and subjective. Of the first, only the elevation of body-heat is always present. With the second, none of these are constant, with the exception of mental and physical prostration, and these are not always.

In the approaching exciting causes of combustive process, various theories were to be considered. Handfield Jones says that the primary process is a paresis of the sympathetic. Another advocates the chemical theory, namely, the introduction into the system of a ferment. The experiments of Billroth show that septic fever is a process of fermentation, and traumatic fever exhibits an intoxication of the blood. The speaker was very certain that febrile influences were produced by neurotic influences.

In regard to the treatment of pyrexia, the introduction of the thermometer may be said to have revealed the diagnosis and prognosis of fever, and two things should be looked after. First, excessive amount of heat, showing an exhaustion of vital power; second, the waste of nitrogenous tissue accumulating in the circulation.

In controlling fever-heat and waste, quinine, digitalis, and calomel were useful, and perhaps aconite and belladonna. Then came in baths, diuretics, food, and alcoholics.

According to the recent investigations of Binz, quinine acts upon the blood, and not upon the nervous system. Whatever is the explanation, clinical experience is the only test, and we know that quinine is more and more given in fevers which are regarded as zymotic in their origin. Whether it checks fermentation, neutralizes the poison, or acts upon the nervous system we know not. As for alcohol, doses which would intoxicate and produce disastrous results in health, would be consumed with benefit in the febrile patient and not recognized in the breath. The doctrine of correlation of forces has here a distinct example. Alcohol supplies energy, is an antipyretic, and not strictly a stimulant in disease. Clinical experience supported this view. In concluding, he believed that the use of alcohol in fever could be defended, as it was the most reliable of the antipyretic remedies.

Dr. Austin Flint remarked that the subject was an important one, considering the extent of the subject. The recital of facts shows that we have no actual knowledge of the cause of pyrexia. The treatment must be guided by the results of clinical experience, and the unsettled views should impress upon medical men the necessity of giving due rank to conclusions from these results. Whether the general phenomena presented may not be caused by one of the phenomena, like heat, remains yet to be determined. It is a common thing to find the increase of pyrexia denoted by temperature not as well noted by the pulse, and here is a field for a very important study and clinical observation.

As to the management of fever, there was an important remedy which had not been mentioned by the author, one a favorite with the Germans, namely, the direct application of cold to the body, to abstract the heat. He was led last winter to read an ancient work by James Curry on cold affusions, and was very much pleased with it. His recital of many cases treated by this method shows that they are as valuable to us today as they were then. Dr. Curry made also a large number of experiments upon healthy persons, as well as the sick; and even *then* he used the thermometer, not only under the tongue but in the axilla. He constructed a thermometer similar to those in use at the present time. It was interesting to recur to his researches.

Dr. Peaslee said that he belonged to the class which had been mentioned, and in commending Dr. Draper's paper he would enter a *caveat* at the same time. The profession must not mistake theories for facts, although they are useful aids for their advancement; it was only by bringing out ideas that we can ever arrive at the facts. Just how quinine keeps down the fever we do not know. When we arrive at the point, that it is an antipyretic medicine, then we must find out what other remedy acts in the same way. If Liebreich had not experimented much we should not have had chloral. Practically, we must hold on to clinical research.

It was high time, and he knew that Dr. Flint would coincide, that professors in our medical colleges should not only teach the theory and practice of medicine, but should also be professors of the *science* of medicine. Alcohol can be given so as to increase or decrease the temperature; in small doses it is a sedative, in larger doses it is a stimulant. It is not desirable to administer alcohol in disease where it acts as a stimulant.

Dr. A. H. Smith spoke as follows: I wish to say a word in reference to urea as a product of combustion. It is a product of combustion as is smoke or soot, but like smoke or soot the quantity formed is a measure of the incompleteness of the combustive process. If we introduce more oxygen into the system, less urea is formed, just as when we afford more oxygen to a gas jet which is smoking we stop the formation of lampblack. In urea we have besides the oxygen, carbon,

hydrogen, and nitrogen; and the quantity of these is greatly in excess of the proportion of oxygen present. A higher degree of oxidation tends to break up the urea into substances of a less complex constitution. That urea results from imperfect combustion is proven, I think, by experiment and by clinical facts. Some experiments of my own go to show that increasing the amount of oxygen inhaled diminishes the quantity of urea excreted. And conversely, it is observed that in many diseases in which respiration is impeded, the excretion of urea is increased. This is notably the case in pneumonia.

I am inclined to regard an elevated temperature as an evidence of impaired or deficient vitality. Fever is a leading symptom in starvation, and in all diseases in which it occurs there is a rapid decline of vital force. We all know that vitality exercises a controlling influence over ordinary chemical affinity, so that a group of elements which, if left to themselves, would form a given substance, combine in an entirely different manner, and constitute an entirely different body when coerced by the organic force. When this force is withdrawn the natural chemical affinities resume their action, the complex organic body is pulled to pieces, and the elements rearrange themselves in simpler inorganic combinations. This constitutes the process of decay.

Hence it would appear that the vital force is an inhibitory power, restraining chemical action; and just in proportion as it is lowered, the tendency to excessive chemical action will be apparent.

With regard to alcohol, it seems to me that in cases suitable for its use it acts merely as an article of food, which is easily assimilated, and which, by its consumption within the body, evolves vital energy. The doctrine of the correlation and conservation of forces, to which Dr. Draper has referred, is based upon the assumption, which has been abundantly proven, that there can be no force developed without consumption of material. In the locomotive the force results from the consumption of coal; in the galvanic battery, from the consumption of the zinc; while animal power results from the consumption of food, which has undergone a transformation into muscular tissue.

Seen in this light, alcohol would bring about a reduction of temperature by increasing the vital force, and thus restraining undue chemical activity.

Dr. A. L. Loomis confessed that he was in darkness in regard to the causes of fever, which were numerous and varied. In different cases it may be caused by a ferment, or blood-changes from external causes. Quinine does not seem to act the same in all cases. In phthisis he gives it to arrest tissue changes. His theory is that it acts as an antipyretic upon the nervous system. As regards alcohol being an antipyretic, his experience showed that it acts best in those cases in which the patient has been addicted to alcohol—the temperature being lowered. In those patients who have not been in the habit of using alcohol he would hesitate to give it. In closing, he said that he was much interested in Dr. Draper's paper.

Dr. Neftel.—The interesting paper of Dr. Draper gives an account of the state of our knowledge as it was when Wünderlich published his work on animal heat in morbid conditions. Since that time, however, five years have elapsed, during which most important experimental researches on this subject have been made by Liebermeister, Senator Horwath, Hueter, and others. The increase of the body temperature being the most pathognomonic sign of fever, the theory of the latter is based to a great extent on the theory of animal heat. With reference to this we know that the normal temperature of warm-blooded animals and man remains constant; that its fluctuations, called forth by different means, are comparatively insignificant and only within the range of a few degrees; that the tendency of the system is invariably to return to its standard temperature, which, if increased or diminished beyond certain limits, is incompatible with life. Lately Horwath has discovered a most remarkable fact, which seems not to be in accordance with the generally adopted physiological laws. He found by very exact thermometrical observations that during hybernation animals (Spermophilus Citillus), whose normal temperature is the same as in other warm-blooded animals, about 37° C., assume the temperature of the surrounding medium. Thus they may be cooled for a considerable time to 2° C. and more, viz., almost to the freezing-point, and yet awake and continue to live.

The researches of Naunyn explain the modus operandi of low temperatures in warm-blooded animals. It was known before him that by freezing the red blood-corpuscles are dissolved. He showed that the smallest quantity of dissolved blood-corpuscles injected into the circulation acts in the most deleterious manner upon the organs, produces extensive coagulations, and invariably kills the animals. It is very probable that death from freezing originates in the same manner.

Under normal conditions the system produces as much heat in half an hour as would increase its own temperature by 1° C., and in 24 hours by 48° C. Therefore, in order that the body-temperature should remain constant, the system must necessarily lose exactly the same quantity of heat as it produces. This is accomplished in different ways. So, for instance, if the surrounding atmosphere is very warm, then the muscular fibres of the skin and the blood-vessels dilate, more blood circulates in the dilated cutaneous blood-vessels, and therefore more heat is given away. At the same time the system is cooled through the evaporation of the increased perspiration. The same is the case when much heat is produced by muscular activity, etc. The reverse, however, takes place if the surrounding air is very cold: the skin and the cutaneous blood-vessels contract, and less heat is wasted. But besides these mechanical arrangements for regulating the body heat by radiation, conduction, etc., there must exist a nervous centre that controls the production and waste of heat. Thus in the cold bath the production of heat is considerably augmented (three or four times more than under normal conditions), even more than necessary to compensate the loss of heat, so that after a cold bath we feel warmer than before. The increased production of heat is accompanied by a corresponding increased production of carbonic acid, thus showing conclusively that the animal heat has the same source with this product of combustion (oxidation). The reverse takes place during and after a warm bath. Tscheschichin found in animals that the temperature increases rapidly and kills them, when a section is made between the medulla oblongata and the Pons Varolii. He therefore concluded that there must exist in that region an inhibitory centre for the production of animal heat.

According to Liebermeister, in fever the regulating mechanisms of heat act in the same manner as in the normal condition. The only difference is, that in the healthy animal the body heat is regulated for the standard temperature of 37° C., whereas in fever it is regulated for a higher temperature of 39, 40 or 41° C. There are two different theories with regard to the cause of increased heat in fever. Some assume that in fever the production of heat is augmented. This may be caused, for example, by the introduction of

so-called pyrogenic substances which excite the nervous centre for the production of heat, or perhaps paralyze the inhibitory centre. Traube and others think, on the contrary, that in fever the wasting of heat is diminished, thus causing an increase of the febrile temperature. This latter assumption is corroborated by the recent observations of Hueter, who found in inflammations a greater number of blood-vessels excluded from the circulation, in which the wasting of heat does not take place.

Dr. Neftel was followed by the President, who referred to a form of catarrhal fever which was of frequent occurrence and obstinate, and spoke of aconite, acetate of ammonia, and colchicum combined with aconite, as valuable febrifugic agents. If 150 grains of urea were excreted in twenty-four hours, every practitioner, he thought, would feel the importance of giving remedies which would counteract this tendency. He has had comparatively little experience with quinine and alcohol in the treatment of fevers.

The Association then adjourned.

Correspondence.

PERCY'S SO-CALLED ALKALOID HYPOPHOSPHITE.*

REJOINDER TO DR. S. R. PERCY.

By EUGÈNE PEUGNET, M.D.

The inditing of a criticism or review is neither pleasant nor easy, for it may not be accepted in the spirit in which it is intended—the advancement of our scientific knowledge. Dr. S. R. Percy, in his answer to my criticism, in the 15th of April issue of this Journal, has certainly accepted mine in the proper spirit, but as he complains that he has not been carefully read, raises several points, alleges that there are several *errors* in the criticism, and *apparently* remains unconvinced. I will answer him *seriatim*.

I. The Doctor alleges that I mean "*antidotal effects* instead of toxicology." He must pardon me if I refer him to Webster's Dictionary (revised edition) for the definition of toxicology, which is a *generic* term; therefore includes "antidotal effects."

II. He claims having "pointed out a new and reliable antidote—oxygen." This assertion is effectually *refuted* by a foot-note (page 44):—"It seems to be acknowledged that pure oil of turpentine (*free from oxygen*) is not antidotal to phosphorus." Moreover he admits in the text "that oxygenated water and spirits of turpentine are both *antidotal* to phosphorus, *provided* they are administered *before* the poison is *absorbed*."

III. The reviewers are advised to "re-read" the "Prize Essay," in order to seek for original matter. Thus, he claims that "in the first 39 pages of my (Dr. Percy's) 'Prize Essay,' I have given a large number of *analyses* proving the presence of peculiarly varied and mobile combinations in the living tissues of man and animals, and I have shown that the vegetable as well as the animal organism is a vast and complete chemical laboratory," etc. As the Doctor invites a much more *searching* criticism, I will now state that the *gist* of the first 24 pages will be found in Graham's Chemistry (Am. edition), *that* of the remaining 15 pages in the various authorities mentioned in the text and foot-notes. With the exception, however, of the Doctor's "so-called alkaloid hypophosphite," his Croton water analysis, and his *method* of extracting a substance (page 33), a nitrogenized phosphate by means of gasoline, from the germ of various vegetables, which he alleges is "one corresponding with the peculiar phosphate of the brain in man." He fails, however, to give us the *ultimate* analysis of this substance which should be the *essential* feature of an essay having such pretensions. In fact, he merely gives us *alleged* results, or more properly, *conclusions* arrived at, without describing his *modus operandi*, which it must be admitted is *essential* for the *verification* of a chemico-physiological investigation. This *omission* has also another important bearing as regards the *legumin*, a nitrogenized phosphoretted substance existing in all vegetables, but the *proportion* of phosphorus *varies* with the species from which it is extracted, and this proportion is again affected by the nature of the soil on which the plant grows. Whether these are two distinct substances or not has not been *elucidated* by Dr. Percy, at all events, in his "Prize Essay."

IV. He *alleges* that I make a chemical *error* in calling lecithine a neutral phosphoretted fatty matter, "an *acid* phosphate." True, according to the construction *it pleases* the Doctor to place on it. But as the researches of such high authorities as Gobley, Chevreul, and others have demonstrated that it is composed of three acids, two of which are simple and one compound, the phospho-glyceric, which are combined with nervine (the base) in such a manner that, *relatively speaking*, as regards the proportion (the number) of the acids to the base, it is an *acid* phosphate, oleate, or margarate.

V. The Doctor claims having found that Frémy's "acide oléophosphorique" is more than a fatty acid. This had already been demonstrated by Gobley, whose researches I presume the Doctor is familiar with, as he refers to him in his essay, but does not credit him with it. Moreover, Dr. Percy fails to give us his *modus operandi*; when *he does*, it will be time enough for *his reviewers* to *verify* his observations by *analyses* of *their own*. Until then, I for one decline accepting any one's *ad captandum* conclusions, for such they must be, if *unsupported* by *experimental* proof.

VI. He asserts that I separated the hypophosphorous acid, owing to its strong affinity for water, by decomposing his "so-called alkaloid hypophosphite." This is simply going into the *reductio ad absurdum*, for at page 53 he acknowledges that it requires boiling water (212° Fht.) to decompose the lecithine, and *his alkaloid* would, *ex necessitate*, require the same, whilst all the hypophosphorous acid can be extracted from the latter at a temperature varying from 60° to 120° Fht.

VII. He then states, that "it is a well-known chemical fact that *anhydrous hypo*phosphorous acid (P. O.) has no separate existence." There is no doubt but that *it was so* until the Doctor formed it in "*statu nascente*" in cocoa butter and lard oil, and *it is* also *true* that it cannot be separated from them in an anhydrous form.

VIII. He exclaims: "Here, at least, is a chemical discovery, but not one at variance with the laws of nature!" What? His *so-called alkaloid!* Turning to page 24, he says: "I have succeeded in converting phosphorus into anhydrous hypophosphoric acid, and so retaining it in this nascent condition until it combines with three equivalents of olein, forming a tri-

* Prize Essay, American Medical Association, 1872.

basic hypophosphite of olein, two of which are *permanently* united with the acid, the other equivalent may be exchanged for another base." Then in a footnote (page 25) he thus *flatly contradicts* it: "In the *union* with all of these oleaginous substances, *glycerine* eventually becomes the base." It is evident, *per se*, that these two assertions are self-contradictory, for it is a well-known chemical fact that glycerine is obtained by the decomposition of olein into oleic acid and glycerine. Therefore, if the first hypothesis is *correct*, it is utterly impossible for the latter *to take place*. I can only explain this self-contradiction in but one way, it is: that the Doctor realized that he could not otherwise reconcile the discrepancies between this artificial *alkaloid* and lecithine.

IX. Dr. Percy then refers us to page 15, to find a statement that the affinity of anhydrous hypophosphorous acid for water is so great, that it even robs sulphuric and hydrochloric acids of their water of combination. If Dr. Percy *will* adopt the advice *he* has so kindly given to his reviewers, and "re-read (his) my essay," he will not find *any allusion* whatever to it, on page 15, or even in *any portion* of his brochure. But, if he turns to page 21, he will there find that *it is phosphoric* acid he alludes to, and *not hypo*phosphorous acid. It is self-evident that this point in his answer is *utterly untenable*.

X. He next asserts that: "the Doctor's (my) analysis, after digesting the fluid with animal charcoal, is certainly incorrect," "for he will find both superphosphate of lime and hypophosphite of lime." That this could not arise from the charcoal is evident, for "I previously tested" its purity by exhausting all the soluble salts contained in it with distilled water. That the Valentine's beef-juice contained 13 per cent. of salts, I was well aware of, and it was needless to search for them. When the preparation is made without the beef extract, the Doctor is well aware that there are none present.

XI. The Doctor also seeks to comfort himself by asserting: that my *analysis* and my reasoning "*à priori*" prove that *he* is correct in *assuming* "that nascent hypophosphorous acid takes up two equivalents of fatty matter;" which does he mean *now*, olein, glycerine, or what? The term "fatty matter" is exceedingly *generic*. Dr. Percy is evidently "effecting a change of base." If it is glycerine he has reference to, there is no foundation for this *comforting* hypothesis, for it is a well-known chemical fact that when a fatty substance is decomposed into oleic, margaric, or stearic *acids*, and *glycerine*, that the *latter* does not again unite with the *former*. As regards the *butyrin* in cocoa butter, it would require artificial means to *reunite* the butyric acid and glycerine, as it does not take place *per se*. Therefore, this is another false hypothesis, as the *theobroma* remains *unaltered*.

XII. Finally, he finds another *alleged* error, in that I call *his* preparation "*hypo*roxidized phosphorus." There is *no doubt* about this one, but it *arises* from *my* having *thoughtlessly* adopted *his* chemical *nomenclature* as *correct*. Dr. Percy says that there are four degrees of the oxidation of phosphorus (p. 16): the oxide of phosphorus, 2 P + O; hypophosphorous acid, P + O; phosphorous acid, P + O_3; and phosphoric acid, P + O_5. It is therefore evident that the first is not an *oxide*, but a *sub*-oxide, 2 : 1, and that the second, 1 : 1, is the oxide *proper*. Then as there is in *hypo*phosphorous acid *more* oxygen than in our author's oxide, it is evident *per se* that *hyper*, which means *more*, an *excess* of, is *relatively* correct.

The Doctor himself affords us the *strongest* point in *support* of *our* criticism, by practically discarding *his* "so-called alkaloid hypophosphite," and substituting what he *calls* in one sentence, "vitalized phosphates," and in the *next*, "vitalized hypophosphites."

It is evident that Dr. Percy, in regard to his "*so-called* alkaloid," is under the impression, as shown by his own admission (page 29), that: "*There are thoughts that dwell with us until they seem to be realities, and although by strict inquiry we cannot in any way of positive reasoning prove them to be facts, we are not the less ready to accept them in our own minds as facts.*"

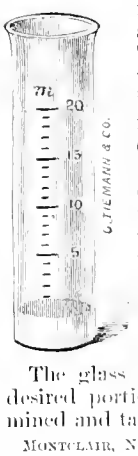
New Instruments.

A NEW GRADUATED MEASURE.

By J. W. PINKHAM, M.D.

MONTCLAIR, N. J.

HAVING frequent occasion to use the hypodermic syringe, and having long felt the need of conveniences for making my solution, especially of morphia, at the time of using it, I induced Messrs. Tiemann & Co. to make a graduated measure, suitable for the purpose, with a case having a compartment for powders. Having tested this measure, and being convinced of its accuracy as well as of its great utility, I take the liberty of asking you to call the attention of the profession to it, believing that its general adoption would do much towards lessening the number of accidents from hypodermic medication. These accidents have been due, I believe, to irritating solutions,* and to mistakes in the quantity of the remedy given, and not to anything peculiar to this mode of administration.



I find it most convenient to carry powders of the sulphate of morphia, containing half a grain each. One of these I place in the glass and throw upon it from the syringe twenty minims of warm water. If the powder remain undissolved, the contents of the glass can be taken into the syringe, and thrown back repeatedly until a perfect solution is obtained.

The glass is so graduated (see wood-cut), that any desired portion of its contents can be easily determined and taken up for use.

MONTCLAIR, N. J., *April* 4, 1873.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from April 19, 1873, *to May* 4, 1873.

MCLAREN, A. N., Surgeon.—Granted leave of absence for 60 days, to take effect from May 1, 1873. S. O. 14, Mil. Division of the Atlantic, April 16, 1873.

HEAD, J. F., Surgeon and Medical Director.—Granted 30 days leave of absence. S. O. 77, Dept. of Dakota, April 17, 1873.

By S. O. 82, War Department, A. G. O., April 18, 1873, the following changes are made:—

The following officers are relieved from their present duties and ordered to report in person to the Commanding Generals of the Departments to which they are respectively transferred for assignment to duty:—

* The development of penicillum will render solutions of the alkaloids, under favorable circumstances, unfit for use in a few hours.

SMITH, ANDERSON K., Surgeon, from the Department of the South to that of the Missouri.

GRAY, CHARLES C., Surgeon, from the Department of the East to that of Texas.

FRYER, BLENCOWE E., Surgeon, from the Department of the Missouri to that of the East.

WEEDS, JAMES F., Surgeon, from the Department of the South to that of the Lakes.

MIDDLETON, J. V. D., Assistant Surgeon, from the Department of the Gulf to that of Dakota.

WOODHULL, ALFRED A., Assistant Surgeon, relieved from duty in the Department of the Missouri, to proceed to Baltimore, Md., and report by letter thence to the Surgeon General.

The following officers are relieved from duty in the Departments set opposite their respective names, will proceed to New York City, and report thence by letter to the Surgeon General:—

GREENLEAF, CHARLES R., Assistant Surgeon, Department of the Columbia;

AZPELL, THOMAS F., Assistant Surgeon, Department of California;

BREWER, JOHN W., Assistant Surgeon, Department of the Missouri;

KOERPER, EGON A., Assistant Surgeon, and PATZKI, JULIUS H., Assistant Surgeon, Department of Texas.

HEGER, A., Surgeon. In addition to his present duties, to perform those of Medical Director of the Department. S. O. 77, C. S., Department of Dakota.

PETERS, DEWITT C., Surgeon. Granted leave of absence for 30 days. S. O. 65, Department of the Gulf, April 26, 1873.

GRAY, C. C., Surgeon. When relieved by Assistant Surgeon Matthews, to comply with orders received from War Department. S. O. 80, Department of the East, April 29, 1873.

HAPPERSETT, J. C. G., Assistant Surgeon. Relieved from duty at Fort Garland, C. T., and assigned to duty at Fort Lyon, C. T. S. O. 63, Department of the Missouri, April 26, 1873.

WOODHULL, ALFRED A., Assistant Surgeon. Relieved from duty at Fort Lyon, C. T., and to comply with S. O. 82, C. S. War Department. S. O. 63, C. S., Department of the Missouri.

BREWER, J. W., Assistant Surgeon. Relieved from duty at Camp Supply, I. T., and to comply with S. O. 82, C. S., War Department. S. O. 63, C. S., Department of the Missouri.

GARDNER, W. H., Assistant Surgeon. Relieved from duty at Fort Hays, Kansas, and assigned to duty at Camp Supply, Ind. T. S. O. 63, C. S., Department of the Missouri.

BENTLEY, EDWIN, Assistant Surgeon. To accompany Battery "G," 4th Artillery, for service in the field against the Modoc Indians. S. O. 44, Department of California, April 13, 1873.

MEACHAM, FRANK, Assistant Surgeon. Relieved from duty in Department of the Platte, to proceed to Boston, Mass., and, on arrival there, report by letter to the Surgeon General. S. O. 87, A. G. O., April 26, 1873.

WHITE, R. H., Assistant Surgeon. Relieved from duty at Mobile, Ala., and to comply with S. O. 74, C. S., A. G. O. S. O. 74, Department of the South, April 17, 1873.

GIRARD, J. B., Assistant Surgeon. Assigned to duty at Camp Apache, A. T. S. O. 21, Department of Arizona, March 31, 1873.

POPE, B. F., Assistant Surgeon. Assigned to duty at Humboldt, Tenn. S. O. 76, Department of the South, April 19, 1873.

KING, J. H. T., Assistant Surgeon. Relieved from duty in Department of the Platte, and to report in person to the Commanding General Department of the Lakes for assignment to duty. S. O. 87, C. S., A. G. O.

CORSON, J. K., Assistant Surgeon. Assigned to duty at Mobile, Ala. S. O. 74, C. S., Department of the South.

MATTHEWS, W., Assistant Surgeon. Assigned to temporary duty as Post Surgeon, Fort Wood, N. Y. H. S. O., 80, C. S. Department of the East.

MACKIN, CHARLES, Jr., Assistant Surgeon. His resignation accepted by the President, to take effect April 29, 1873. S. O. 89, War Department, A. G. O., April 30, 1873.

Medical Items and News.

THE RAISING OF CHILDREN DOUBLED.—Dr. Farr reports that the proportion of children raised has doubled within a hundred years. In London, the proportion of deaths under five were—1730 to 1749, 74.5 per cent.; 1770 to 1789, 51.5 per cent.; 1851 to 1870, 29.8 per cent.

PROF. WILLARD PARKER, of New York, made some interesting remarks on "Cancer of the Female Breast," before the New York Medical Library and Journal Association, April 18th, 1873. We shall publish them in full in a future number.

DR. J. SOLIS COHEN'S lectures before the College of Physicians of Philadelphia, being the Mütter lectures for 1872, are being published in full, with illustrations, in the *Philadelphia Medical Times*.

DR. SUSAN DISNACK, a graduate of Zurich, 1871, asked for admission into the Massachusetts Medical Society. Said Society is in doubt as to whether its charter allows the request.

DR. W. PORTER, late of the Hartford Insane Asylum, has been elected Superintendent of the New York Institution for the Instruction of the Deaf and Dumb.

NEW YORK MEDICAL AND SURGICAL SOCIETY.—The officers of this association, organized in 1834, for 1873, are as follows: *President*, Dr. Geo. A. Peters; *Vice-President*, Dr. Chas. M. Allin; *Secretary*, Dr. Geo. G. Wheelock; *Treasurer*, Dr. Robt. Watts.

DESCARTES' SKULL.—A cast of the skull of Descartes—which is kept at the Paris Garden of Plants—has been given by Prof. Gervais to the Archæological Society of Touraine. A cast has also been taken for London and another for Stockholm.

MINNESOTA STATE MEDICAL SOCIETY.—The officers of this Society for 1873 are: *President*, Dr. W. W. Sweney, of Red Wing; *1st Vice-President*, Dr. W. W. Clark, of Mankato; *2d Vice-President*, Dr. A. E. Senkler, of St. Cloud; *3d Vice-President*, Dr. M. Hagan, of St. Paul; *Treasurer*, Dr. S. B. Sheardown, of Stockton; *Recording Secretary*, Dr. Chas. E. Smith, of St. Paul; *Corresponding Secretary*, Dr. H. C. Hand, of St. Paul.

The sixth annual meeting will be held at Mankato, on the second Tuesday in June, 1873.

The London Medical Societies.—The presidents of the various medical societies of London, for 1873, are as follows: Pathological Society, Sir Wm. Jenner; Obstetrical Society, Dr. Edward J. Tilt; Harverian Society, Dr. T. Ballard; Royal Medical and Chirurgical Society, Dr. C. J. B. Williams; Clinical Society, Prescott G. Hewett; Medical Microscopical Society, Mr. Jabez Hogg.

A New Southern Medical Journal.—Drs. F. Peyre Porcher and R. A. Kinlock are the editors of the new *Charleston Medical Journal and Review*, which is to be published quarterly. The April No. contains an excellent salutatory, nine practical original papers, several reviews, and abstracts from foreign and domestic journals.

Cancer of the Liver.—H. A. West, M.D., Physician to the Louisville City Hospital (*Am. Practitioner*, March, 1873), reports a fatal case of cancer of the liver, occurring in a male, aged 65 years, in which the *post-mortem* showed that, notwithstanding extensive degeneration and disorganization of hepatic substance, there was very slight disturbance of the digestive functions. The cancerous disease existed primarily and alone in the liver. The case illustrates a fact mentioned by Andral, in his *Clinique Medicale*, namely, that many of these cases approach a fatal termination before the gravity of the disease is suspected.

American and Foreign Cities.—The area in square miles, and population to the square mile, of some of our home and foreign cities are as follows:

	Area.	No. to the square mile.
Chicago	223 square miles	1,350
London	122 " "	26,000
Philadelphia	120 " "	5,400
Boston	110 " "	2,300
San Francisco	90 " "	1,500
Paris	63 " "	28,000
Pekin	56 " "	28,500
New York City only	22 " "	43,000

The Regular Profession in Philadelphia.—The *Philadelphia Medical Register* states there are in that city 699 regular physicians; of these, 50 are on the retired list.

New York College of Pharmacy.—Thirty-three graduates received diplomas, April 1st, 1873, at the commencement of this Pharmaceutical Institution.

Trichinous Disease has been prevalent in Framingham, Mass.

Harris.—Dr. Elijah P. Harris, Prof. of Chemistry in Amherst College, Mass., has sailed for Europe. He will devote himself to study in Leipsic. The College Trustees have given him authority to expend several thousand dollars for additions to his laboratory.

Conception at Eleven Years.—Dr. Dills, of Carlisle, Ky. (*The Clinic*, March 29th, 1873), was called to attend a colored girl in labor, aged eleven years and nine months, and found a vertex presentation, first position; the pelvis was large and roomy, labor progressed rapidly, and a living child weighing nine and a half pounds was the result. The girl had never menstruated.

[Lobstein and Canes (*Medico-Chirurgical Review*, October, 1838) each relates a case in which menstruation commenced in, and continued regularly after the second year of age; in one of these cases the girl conceived in her eighth year. B. S. T.]

Homicides in New York City.—Dr. Chas. P. Russell, Registrar of Records in Health Department, states that since March 10th, 1871, when John Thomas Rosenville was hung, 104 homicides have been committed in this city; of which only one, Wm. Foster, March 21st, 1873, was executed.

Adams.—A bequest of $54,575.11 was made to the Hartford Hospital, by the will of the late Chester Adams, of Hartford, Conn.

Beale.—Medical Director Joseph Beale, U. S. Navy, has been appointed Inspector-General of hospitals and fleets, the appointment taking effect April 1, 1873.

The Medical Society of New Jersey holds its one hundredth and seventh annual meeting at Mount Holly, N. J., May 27 and 28.

Jefferson Medical College.—The Pennsylvania Legislature has recently appropriated one hundred thousand dollars to the trustees of this school as a contribution to the fund for the erection of a College Hospital.

Death of Surgeon Madison Mills.—The Surgeon General announces with regret the death of Surgeon and Brevet Brigadier-General Madison Mills, which occurred at Fort Columbus, New York Harbor, on the 28th of April.

Receiving his commission as Assistant Surgeon U. S. A. in April, 1834, Surgeon Mills' service extended over a period of thirty-nine years, during which it was his fortune to take part in the Florida war, the war with Mexico, the Utah Expedition of 1858 (as Medical Director), and the war of the Rebellion. He was Medical Director of the Department of Tennessee (General Grant's army) at the time of the siege and surrender of Vicksburg, and in December, 1864, was appointed Medical Inspector-General, the duties of which position he discharged most satisfactorily. In November, 1864, the brevets of Lieutenant-Colonel and Colonel, and in April, 1865, that of Brigadier-General were conferred upon him for faithful and meritorious services.

Possessed of unflinching determination and courage, and guided by professional abilities of a high order, his administration of the trusts confided to him was marked by a prompt efficiency and sound judgment that secured successful results, even under the most adverse circumstances.

New Publications.

A Treatise on the Principles and Practice of Medicine, designed for the Use of Students of Medicine. By Austin Flint, M.D., Professor of the Principles and Practice of Medicine, Bellevue Hospital Medical College. Philadelphia: H. C. Lea. Fourth Edition. 1873.

The Passions in their Relations to Health and Disease. Translated from the French of Dr. X. Bourgeois. By Howard F. Damon, A.M., M.D. Boston: James Campbell. 1873.

Civil Malpractice. A Report presented to the Military Tract Medical Society, January 14, 1873. By M. A. McClelland, M.D. Chicago: 1873.

A Manual of Popular Physiology, being an attempt to explain the Science of Life in untechnical language. By Henry Lawson, M.D. New York: Putnam's Sons. 1873.

Medical Department of Life Insurance.

LONGEVITY AND OTHER BIOSTATIC PECULIARITIES OF THE JEWISH RACE.*

By JOHN STOCKTON HOUGH, M.D.

EACH race, nation, class, and family of people have physical, moral, and spiritual peculiarities and immunities which always differ in degree, and often in kind, from every other race, nation, class and family; and had we the statistical data for comparison, it is more than probable that we should find this difference quite marked in several particulars, though I scarcely think it would be found so distinctive and decided as the uniformly defined differences between Christians and Jews.

These differences, I am persuaded, are not only to be attributed to a difference in physical constitution, but to differences in morals, habits, customs, occupations, observances, traditions, all of which may in some degree affect biological phenomena.

The kingdom of Prussia has kept for a greater number of years than any other, reliable statistics of the Jews† and Christians in its domains, and made the comparisons which enable them to appreciate their value as subjects. M. Legoyt‡ has analyzed these statistics for the period from 1825 to 1861 (period 1849 to 1852 excepted). He finds the increase always surpasses that of the general population—and, above all, by the excess of births § over deaths; if there are fewer adults there are more aged. The proportion of sexes is 103.37 women to 100 men, in place of 100.72 women for 100 men in the general population.

The OCCUPATIONS are as follows:

	General Population.	Jews.	
Agriculture, Gardening, and Agricultural Industry	42.53	2.18	per ct.
Industry	39.41	18.37	"
Commerce	5.17	57.33	"
Domesticity	3.25	6.73	"

In Industrial professions and Commerce we see 75.70 per cent. of the Israelites.

MARRIAGES RARE.—According to statistics in Prussia, marriages among Jews are more rare than among other religionists, as may be seen from the following statements (from Lévy,‡ p. 17).

INHABITANTS TO ONE MARRIAGE.

Years.	Evangelists.	Catholics.	Israelites.
1831	139.21	126.62	155.12
1834	102.76	103.99	120.94
1837	110.02	109.38	142.20
1840	112.08	113.61	127.58
1843	107.97	113.19	123.21
1846	112.36	122.93	134.54
1849	107.77	111.40	174.92

* NOTE.—The writer of this article deems it proper to state that he was induced to compile it through the kind invitation of the editor of this department of the RECORD, and has not sought to appear in the gratuitous position of an "elegant apologist" of the Jewish race, but merely to bring together from various sources the facts as he finds them, solely for the benefit of science, hoping that Christians who are not blinded to the advantages arising from keeping the Mosaic Laws may take heed and profit by example. He regrets that he has not, from the very short space allowed and time allotted, been able to collect more facts, and arrange them in a more acceptable manner.

† There are about 7,000,000 Jews living in the world at the present time. Their density is independent of society, religion, or government. There is one Jew to every 446 inhabitants in England, 1 in 468 in France, 1 in 42 in Russia, 1 in 33 in Austria, 1 in 105 in Germany, 1 in 61 in Turkey, and 1 in about 58 in Europe. There are probably 75,000 Jews in the United States, or 1 to every 500, of which between eight and nine thousand are in Philadelphia, or 1 to every 100 inhabitants.

‡ Journ. de la Société de Statistique de Paris, de Juillet et d'Août, 1865.

§ The Talmud says of the command to increase and multiply, "who neglects this precept commits a homicide, and it is the cause for which God abandoned Israel." The Talmud also recommends not to espouse a woman who is defective, and that the best age for marriage is 30 years.

‖ De la Vitalité de la Race Juive en Europe, Annales d'Hygiène Pub., etc. t. xxv. 2d Série, 1866, and Pamphlet. Paris, 1866, pp. 30.

Dr. Glatter * has found the same to be the fact among the Jews of Wieselburg, in Hungary. In Saxony there was 1 marriage among 113 Israelites, and 1 among 103 Christians. In Tuscany, for the year 1861, 1 to 103 Christians, and 1 to 141 Israelites. In some countries this lessened frequency of marriage among Jews was in some degree due to restrictions of municipalities and governments, which did not allow an Israelitish marriage unless the contracting parties could show some palpable means of maintaining themselves in their new social state.

This, however, has mostly disappeared, and the difference between the frequency of marriage among Jews and Christians is probably due to custom or habit of these people, who probably make better preparations to meet their obligations than Christians, in addition to the larger proportion of children and the aged among Jews, which renders the proportion of the population capable of contracting matrimony sensibly less.

FECUNDITY.—Following Lévy; not only do Israelites marry less, but they have fewer children, fewer still-births, fewer deaths among the children born alive. From the documents in Prussia, there were 29.97 inhabitants for 1 birth, while among the Christians it only required 25.21 persons from which to recruit 1 birth annually.

I would suggest that were the above facts the only ones upon which the lesser fecundity of the Jews was based, I should think the conclusion—in view of the facts already mentioned, viz., that there are more marriages, consequently a greater proportion in state of matrimony; more deaths among children of Christians, consequently larger proportion of adults, that is, persons capable of contracting marriage, besides the larger proportion of aged—as unwarranted in the premises, and of necessity erroneous, in degree at least—which last named position is corroborated by Henke,† who says that in Prussia, Christians have 4.3 children to each marriage, and Israelites 5.2—while another writer‡ says that in this monarchy for the years 1820 to 1825, the Christians had 5.35 children to each marriage and the Israelites 4.78.

At Furth, an average for 25 years gives 1 marriage to every 128 Christians, while Jews number 149 to 1 marriage. Among Christians it required but 29 inhabitants to recruit one birth, while among Jews it required 35.

AGE AT MARRIAGE.—In marriages the age of Jews is more advantageous than Christians. Of 100 persons,

Only 29 Christian men were under 30 years of age.
While 37 Jewish " " " " " " "
Only 54 Christian women " " " " " "
While 69 Jewish " " " " " " "

Under 25 years of age there were, in 100 marriages, 26 Christian unions, and 45 Jewish unions.

In 1,000 marriages in which the man was less than 45 years, the woman less than 40 years, there were 746 Christians and 782 Jews; in which the man was less than 60 years and the woman less than 45, there were 212 Christians and 170 Jews; in which the man was more than 60 years and the woman more than 45, there were 42 Christians and 48 Jews.§

CHILDREN—EXCESS OF MALE BIRTHS.—One of the most marked and unvarying physical peculiarities of this race, is the much larger proportion of boys among the births than among Christians in the same places

* Annales d'Hygiène Pub. et Med. Leg., t. xxiii. 2d Série, p. 223.

† Zeitschrift fuer die Staatsarzneikunde, t. xii. p. 230.

‡ Babbage, Edinburgh New Philos. Jour. v. 1.

§ On the number and increase of Jews in the Prussian States, &c., &c., by C. R. Weld, trans. from M. Hoffmann.

living under the same circumstances. I have collected with much care, from various sources, the following facts, and brought them together in tabular form as seen below:—

PROPORTION OF SEXES AMONG BIRTHS OF ISRAELITES.

Country.	Period.	Whole Number.	Boys to 100 Girls.
Israelites in Prussia*		(5,518 boys and 4,682 girls)	113.00
" " "	1827	(2,956 " " 2,624 ")	111.00
" " "	1820-54	(12,454 " " 11,029 ")	112.92
Christians " "	1820-54	(812,894 " " 791,580 ")	106.08
Israelites " Berlin 16 years‡			
in succession, anterior to 1820		(528 boys and 365 girls)	144.65
Israelites in Breslau, 1782 to 1800§			114.00
" " Leghorn			120.00
Christians " " ‖			104.00
Christians, legitimate, in Prussia¶			106.07
" illegitimate, " "			103.60
Jews, legitimate, " "			109.56
" illegitimate, " "			101.19

The greater proportionate number of male births among Jews may be in some degree influenced by the age of the parents at the time of marriage, as Jews marry younger than Christians; it is in some degree due to a better physical constitution, which they undoubtedly inherit, or they would not live so much longer than Christians; but most of all is this decided peculiarity due to the observance of certain Mosaic laws (Levit. c. xv. 19, 28), which physiologists have not failed to recognize.

SEXES IN THE POPULATION.—What is most remarkable in reference to the proportion of sexes, is the fact (if a fact, as stated by Lévy) of there being a smaller proportion of males *of all ages* among the Jews than in the general population, while the former have uniformly such a large excess of male births. Jews have an excess of males at birth amounting to nearly 18 per cent., while the general population have only 6½ per cent., yet, notwithstanding this, if all ages be taken in the population, Jews have 3.25 per cent. fewer males than females, while the general population have only .8 per cent. fewer males than females. This difference is certainly greater than could be accounted for by a difference in emigrants in favor of males, and is probably due to greater proportionate mortality among Jewish male infants, or greater longevity of their females; probably the latter.**

MENSTRUATION.—Raciborski†† has determined that different races begin to menstruate (reach puberty) at different ages, which indicates that some races develop with greater rapidity than others, and it is probable that this difference in the time of development may affect the probability of life. He found that 70 noble women began to menstruate at 13 yrs. 1 mo. and 5 days; 100 Hebrew women, at 14 yrs. 3 mos. and 25 days; 200 Slavonic women at 15 yrs. 3 mos. and 9 days.

IMMUNITY FROM DISEASES.—DR. Glatter (Directeur du Bureau de Statistique à Vienne), in his paper on "The Influence of Race on the Duration of Life,"§§ gives the following table illustrative of the relative frequence of disease among different races in the same locality.

	Number ill.	Number to 1,000 inhabitants.
Magyars,	6,034	534
Germans,	3,806	223
Slavonians,	1,522	182
Servians,	252	28
Jews,	1,540	32

The Jews present a remarkable immunity from intermittent fevers, convulsions, and tabes mesenterica of children, and from phlegmasiæ of the respiratory organs. They give on the other hand higher figures for *gale* and other apyretic cutaneous affections, also for gastro-intestinal catarrhs and hernias.

According to Boudin,* the first epidemic of cholera fell heavily on the Jewish race.

They have had in recent times a very marked immunity from the plague, which was so noticeable that it was the motive of odious persecutions.

Tschudi,† in speaking of the plague of 1346, says that this malady did not affect the Jews of any country. Fracastor mentions the fact that the Jews escaped completely the epidemic of the typhus of 1505. Rau‡ mentions the same immunity from typhus observed at Langeons in 1824. Ramazzini insisted on the immunity of Jews from the intermittent fevers observed at Rome, 1691.

Degner says the Jews escaped, in 1736, the epidemic of dysentery of Nimègue. Michel Lévy makes the remark that this immunity was manifest at the same time in the French and in the Israelites.§ M. Eisenmann insists on the extreme rarity of croup in the Jewish children.

The inquiry made in 1843 by the Prussian government in certain cities in the Grand Duchy of Posen, found that in several localities there existed a malady affecting the hair, of which the following races were attacked in the proportion indicated by the numbers set opposite them:—

1 in every 33 individuals of the Slavonic race.
1 " " 65 " " " Germanic "
1 " " 88 " " " Jewish "

The *Comptes Rendus* of the Minister of War gave for the civil population of the cities of Algeria the mortality below:—

	Deaths for 1000 inhabitants. 1844.	1845.
Jews'	21	36
Mussulmen	32	40
Europeans	42	45

According to Dr. Stallard, in his work on "London Pauperism," Jewish children have no hereditary syphilis, and scarcely any scrofula. Their greater tenacity of life is therefore not only due to better maternal care and nursing, but to the inheritance of a better physical constitution than the Christian child.

DURATION OF LIFE.—M. Lévy estimates that the mean average duration of life among Jews exceeds that among Christians by about 5 years. In Prussia, the civil records indicate 1.61 deaths to 100 living Jews, while for the general population of the entire kingdom it is 2.62 for 100; from which it follows that the population increases by 1.36 for 100 among Christians and 1.73 among Jews, per year. The effect of this is to double the Christian population in 51 years, while the Jews would double in 40.5 years. In 1849, Prussia computed 1 death for:

Evangelists.	Catholics.	Jews.
34.35 inhab.	30.18 inhab.	40.69 inhab.

M. Legoyt has constructed for France (from 1855 to 1859, 5 years) a table of mortality with the deaths by ages of Jews and of the total population, from which he deduces the following conclusions:

* Henke, Zeitschr. f. d. Staatsarz. t. xii, p. 230.
† Babbage, Edinburgh New Philosoph. Jour. V. 1.
‡ Hufeland's Jour. f. d. Praktischen Heilkunde, 1820, p. 11, ext. in Burdach's Physiol. V. 11, p. 255.
§ Correspondenz der Schlesischen Gesellschaft f. Vaterlandische Cultur, t. i, p. 58. ‖ Valentin.
¶ Boudin, Annales d'Hygiene Pub. v. xliv, 1856.
** The author will enter more fully into this subject in a forthcoming article on "the Relative viability of the sexes."
†† Traité de la Menstruation, Paris, 1868, 8vo, pp. 430.
§§ Das Racemoment in seinen Einfluss auf Erkrankungen. Casper's Vjsch, 1864, t. xxv. p. 32-45.

* Etudes de Pathologie Comparée, in Annales d'Hygiène Pub. et Med. Lég. 1849. v. 42 p. 59-61.
† Iselin, Schweizer Historie, 1734.
‡ Rau, uber die Behandlung des Typhus. Heidelb. Klin. Ann. B. ii. 1826.
§ Traité d'Hygiène, v. ii.

1st. At birth, the mean life of the general population rises superior to that of the Jewish population (men). 2d. At all the other ages the advantage appertains to the Jews. 3d. As for the Jewish women, their mean life does not attain to that of the general population of the same sex until the age of 60 years; but in parting from this limit they become superior.

Dr. Stallard, in his work on "London Pauperism," says: That the mortality among Jewish children from 1 to 5 years of age is only 10 per cent., while among the Christians it is 14 per cent. The average duration of life of the Christian in London is 37 years; of the Jew, 49 years.—Extract in *Phila. Med. Times*, Dec., 1872, p. 178.

Deaths among 100,000 individuals:—

Mortality.	Christians.	Jews.
Still-born	143	89
Under 1 year	697	459
1 to 5 years	477	386
5 to 14	202	151
14 to 25	155	123
25 to 45	334	231
45 to 70	614	392
70 and above	239	330
All ages	2,961	2,161

Of 100,000 children:—

	Christians.	Jews.
Still-born	3,569	2,524
Under 1 year of age	17,413	12,935

M. Mayer, in his treatise* relative to the duration of life in the Jewish population compared with that of the Christian, found the following facts connected with the statistics of Fürth for a period of 10 years:—

MEAN AVERAGE DURATION OF LIFE.

Jews, 37 years; Christians, 26 years; excess in favor of Jews, 11 years.

From one to five years old, Jews lose 10 in 100, Christians 14 in 100. This difference holds to the 60th year, but then the difference changes in favor of Christians. From 60 to 70 years, Jews lose 9.8 in 100, Christians 12 in 100; 70 to 80, 8.9 in 100 Christians, 7 in 100 Jews; 80 to 90 yrs., 2.4 Christians in 100, and 8.1 Jews. This result, he says, is not astonishing, since of those who pass 60 years, more individuals of the Jewish race than Christians are living. Among the Christians one-half die before 30 years, while one-half of Jews live to 50 yrs. In France, Dr. Neufville has reached analogous results.

The mean general mortality is	37 yrs.	7 mos.	
Christians, " " "	36 "	11 "	
Jews, " " "	48 "	9 "	

In the first five years of life, of 100 children of Jews, 12.9 die; of 100 children of Christians, 24.1 die. Among 100 Christians, 38.1 attain to 50 years, and 54 among Jews. 13.4 Christians attain to 70 years, while 27.4 Jews attain the same age. One-quarter of Christians attain only 6 yrs. 11 mos., and one-quarter of all Jews 28 yrs. 3 mos. One-half of all Christians die at 36 yrs; Jews, 53 yrs. 1 mo. There is only one-quarter of the Christian population of Frankfort living, above 59 yrs. 10 mos., while among Jews one-quarter pass 70 yrs. Dr. Neufville explains these differences by the following circumstances. There are no proletaires among the Jews, while one-tenth of the Christians live on public charity. Most Jews are in commerce or letters, very few are laborers. Among 100 commercials above 20 yrs. of age, the one-half of the Christians succumb before 57 yrs.; one-half of Jews before 67 years only.

It is in this longevity that the Jews increase more than Christians, and not in marriages and births. In Prussia the Jewish population (1822–1840) increased 34½ per cent., while in the same lapse of time Christians augmented only 28 per cent., increase by immigration being about the same. There was one birth to every 28 Jews, 1 to every 25 Christians; 1 marriage among every 139 Jews, 1 among 112 Christians; 1 death among 40 Jews, 1 in 34 Christians.

Increase in population among 100,000 individuals:

	Christians.	Jews.
Marriages	893	719
Births	4,001	3,546
Deaths, still-births included	2,961	2,161
Excess of births over deaths,	1,040	1,385

According to Lévy, in a mortuary table brought to 1,000, and which embraced a period of 23 years (1833 to 1855), Dr. Glatter compared the following named races with the Israelites, with the result annexed.

	Mean Duration of Life.	Probable Duration of Life.	Among 1,000 Deceden's, No. living from 50 to 100 years of age.
Germans	28.50	21.30	86.7
Hungarians	23.11	10.10	54.4
Croats	22.10	4.80	70.6
Jews	30.20	22.30	120.9

SUICIDE.—Statistics show that Jews commit suicide much less frequently than other religionists, as the following table from Lévy (out of Legoyt) will show.

Among 1,000,000 inhabitants the following numbers commit suicide in each class:—

Country.	Protestants.	Catholics.	Other Christians.	Jews.
Prussia	159.9	49.6	130.8	46.1
Bavaria	135.4	49.1	—	165.9
Wurtemburg	113.5	77.9	—	65.6
Austria	79.5	51.3	54.0	20.7
Hungary	54.4	32.8	12.3	17.6
Transylvania	73.6	113.2	20.5	35.5

The only country in which suicide is more frequent among the Jews than the Catholics and Protestants is Bavaria, and even here M. Legoyt says that in the Palatinate, where the Jews are more numerous, they number fewer suicides proportionally than among the Catholics.

INSANITY.—M. Lévy says—"We associate with suicide, mental alienation; the example of the Israelites seems to contradict this idea, for with the minimum of suicides, statistics impute to them the maximum of *aliénés*."

CRIMINALITY.—The Prussian judiciary statistics, as those of other countries, signal in the Israelites fewer infractions of the penal code than in the Christians:

		1857.	1858.	1861.
Inhabitants for 1 accused	Jews	172	138	150
	Christians	111	117	129

INFANTICIDE AND ABORTION.—I have not met with any comparison of the relative frequency of infanticide and abortion among Jews, as compared with other religionists, but am persuaded that they are, as a race,

* Ueber die Lebenserwartung der Israelitischen Bevölkerung gegenüber der Christlichen. Deutsche Zeitschr. f. d. Statistik, t. xxi, p. 2, 863.

freer from these iniquities than any other people. Protestant clergymen * and physicians † have shown that these crimes are much more frequent among Protestants than among Catholics in New England.

Illegitimacy.—They have fewer illegitimate children; the *Tabellen für* 1849 indicates the total number of births for one illegitimate birth:—

Years.	Evangelists.	Catholics.	Jews.
1831	11.27	16.48	54.21
1834	10.97	16.05	54.68
1837	11.32	16.76	45.78
1840	11.57	16.73	47.61
1843	10.92	16.43	47.07
1846	10.87	16.09	43.83
1849	10.78	16.35	40.09
Average.	11.10	16.40	47.59

Chastity.—The fact of the Catholic women having nearly three times as many illegitimate children as the Jewish, indicates that the Jewish *women* are three times as chaste, and more than four times as chaste as female "Evangelists." This fact by no means warrants us in attributing to Jewish *men* a chastity equal to that of their women, for I am convinced that Catholic men are very far below their sisters in chastity. It is universally conceded that Irish women (particularly Romanists) are, as a nation, more chaste than any other, while the Jews (women in particular) are more chaste than any other race. The writer would venture to suggest that the chastity of the Irish women is principally to be attributed to the almost universal influence of the Church of Rome, probably through the influence of sacramental "auricular" confession, while the traditional shame of illegitimacy among the Jews keeps up their standard of chastity.

The influence of religions on chastity is very noticeable in Great Britain; the Catholics (Irish) being most chaste, the Anglicans (English) coming next, while the Protestants (Scotch) are least chaste of all. It is true that race here may have some influence, but I am fully persuaded that the prevailing religions are in some degree responsible for those differences in degrees of chastity. James Parton, the historian, says ‡ of the Jews: "At the present hour they are probably the chastest seven millions of people under the sun."

Still-Births.—The same authority (Legoyt) says, they have fewer still-births, that is to say, infants who succumb before, during, or a little after labor; the proportion is for them 1 in 39.5 births, while it is 1 in about 30 in the Christians (Hoffmann, period 1823 to 1840). In 1849, M. Legoyt notes 1 still-birth among

	Evangelists.	Catholics.	Jews.
Legitimate births,	24.61	27.24	71.32
Illegitimate births,	17.86	20.05	26.43

Glatter (loc. cit.) gives 1 still-birth in 19 among Christians, and 1 in 34 among Jews.

	Christians.	Jews.
Still-born in Prussia in 100,000 inhab.	143	89
" " among 100,000 child.	3,569	2,524

Infant Mortality.—According to Lévy, (p. 18) the Jews lose fewer children than other religionists; from 1859 to 1861, we find in Prussia, for 100 births the proportions of mortality which follow:

Evangel's.	Cath.	Philipos.	Ger. Cath.	Mennoni's.	Jews.
66.37	65.94	56.04	56.77	86.66	48.11

· *Our Israelitish Brethren*, Atlantic Monthly, Oct. 1870. pp. 358–403.

* Rev. John Todd. Serpents in the Dove's Nest.
† Dr. Horatio R. Storer. Is it I, etc. Boston.
‡ James Parton. *Our Israelitish Brethren.* Atlantic Monthly, Oct. 1870. pp. 358–403.

Causes of Longevity.—Besides physical causes of longevity already mentioned, there are others which may have some weight in this direction. Among these, the fact of Jews being obliged to keep two Sundays in a week, besides Jewish, Christian, and political holidays, or two out of every five days being lost to business, gives them by necessity about twice as many days of leisure as Christians. They do not engage in mining, mechanics, and other hazardous occupations. The biblical and traditional prohibition of certain aliments is favorable to longevity. The fifth and last of the summary of causes to which M. Legoyt attributes the greater mean average duration of life of this people, is "the *sentiment de la famille*, more developed in them than in Christians, assures to their children, to their aged and infirm parents, a solicitude more active; to the new-born the mother's nursing; to the poor an assistance more efficacious. Their charity is unequalled; their morality is demonstrated by judiciary statistics; the firmness and serenity of spirit are the most marked traits of their character, and proceed from a profound faith, from an unalterable confidence in Providence." They rarely use alcoholic liquors and almost never to excess; this is universally conceded. They seldom marry out of their own race, and have little hereditary disease.

Parton, who quotes from the organ of the London Society for the Conversion of Jews, which spends $250,000 annually "in converting (?) a few poverty-stricken wretches, and sending abroad on highly interesting tours a few plausible renegades," confesses: "As to their moral qualities, the evidence seems to show that the lower class of Jews are decidedly superior to the same class among ourselves. They are far less given to drinking; their religious customs enforce a certain amount of cleanliness, both personal and in their dwellings; and two families are never found inhabiting the same apartment."

Among the conditions unfavorable to longevity, we may mention their almost universal habit of residence in large cities, and the rarity of their engagement in agricultural pursuits.

Dr. Glatter concludes from all this that, under the relation of duration of life, the Jews are in a condition much more advantageous than Christians. In effect, the more the mean duration of life augments in a people, as is the case with the Jews, the more it diminishes the number of widows and orphans; the more numerous the active and productive class, the more it diminishes the class of pure consumers.

It is evident from all we have here shown, that the numerical increase of a race depends more on the conservation of those already born than in a great fecundity with less conservation of the issue.

The Jews have always taken every precaution to preserve the life of every individual born.

The Mosaic laws prescribe most of these measures,—even to the construction of their houses, requiring balustrades about the roofs to keep children from falling from them. Ancient Rome, with all the jealous care she exercised in the conservation of her citizens, did not approach the excellence of the Mosaic dispensation of these matters.

Jewish subjects would therefore appear to be much more advantageous risks for life companies than other races.

Note.—It is quite remarkable that Haller, with all his sagacity, should not have mentioned the Jews, in his study of the longevity of different races and nationalities.—Elementa Physiol. Corporis humani, t. viii. 2d edit. Lausannæ, 1778. L. xxx. sect. iii.

The author regrets not having been able to gain access to Prof. Stowe's lectures on Jewish Longevity, delivered at Hartford some years since.

2003 Walnut st., Philadelphia, April 9th, 1873.

PERSONAL HABITS.

By EDWARD W. LAMBERT, M.D.,

NEW YORK CITY.

It is not an easy matter to pass a correct judgment upon the insurability of an applicant by reading the application, even when the utmost confidence is imposed in the integrity of the agent, and in the professional skill of the medical examiner. The difficulty increases when the questions are answered in a general and indefinite manner. No question presents more difficulties than that relating to the personal habits of the applicant. As a rule this question is answered more indefinitely than any other in the application: yet this is *the question*, of all others, which will give the most information as to the probable longevity of the individual, and it ought to be answered so definitely and clearly, that he who reads may correctly understand the manner of the daily life of the applicant.

The word temperate ought to be used in its broadest sense, referring to the quantity and quality of food taken, as well as to the kind and quantity of fluid used by the individual in question.

A strictly temperate man is one who "eats neither too much nor too little, who uses plain and wholesome food," and who proportions his food to his temperament, his age, and his vocation, and who uses alcoholic stimulants and malt liquors medicinally, not as a beverage. It is admitted few applicants fill the above standard, but the nearer any one approaches it, the more likely will he be to live out his expectation of life.

The question of temperance in eating is not sufficiently regarded, yet, according to the recent mortality tables of England, more men at the present day die early from excessive indulgence in eating, than from the excessive use of alcoholic stimulants.

In order to give an approximate idea of the personal habits of applicants for life insurance, it would be wise to divide all persons of the same age into four equal classes, putting each individual into that class with which his personal indulgence places him.

Class I. will include those who are careful eaters, and total abstainers from alcoholic stimulants and malt liquors, or who use the latter medicinally.

Class II. will include those who use wine and malt liquors at dinner, who may occasionally indulge in food to excess, but who, as a rule, are as careful in their indulgence as Class I.

Class III. will include those who are steady but moderate users of alcoholic stimulants, who are fond of the pleasures of the table, yet no one can say they are ever overcome by their appetites. This is the doubtful class, and it is a very deceptive one to life insurance companies.

The steady and moderate drinker of to-day may become, and too often does become, the drunkard of a few years hence. Many do not live long enough to carry their indulgence to excess, but die early from some acute disease, such as pneumonia, &c., simply on account of the continued use of alcoholic stimulants.

Class IV. will include all those who are known to be given to excessive indulgence.

There is another class of individuals concerning whom it is extremely difficult to decide with justice to them and to the company, namely, those who have used alcoholic stimulants to excess, but who have become total abstainers.

The length of time since the reformation ought to be distinctly given. The extent to which the indulgence was carried ought to be definitely stated. If the reformed individual has ever had *mania à potu*, it is useless to examine such an one, as it is an almost universal rule that such a person will eventually return to his old habit, and die in consequence of his excessive use of alcoholic stimulants. The age at which the reformation takes place, and the present social position of the individual, have much to do with the probable continuance of the good resolution.

This subject is by no means exhausted, but enough has been said to call the attention of medical examiners to the fact, that they cannot be too minute in giving an account of the personal habits of applicants for life insurance.

ON THE RELATION OF THE MEDICAL EXAMINER TO THE BUSINESS OF LIFE INSURANCE.

BY THE SECRETARY OF A LIFE INSURANCE COMPANY.

The writer of this article has found by actual inquiry that the opinion very generally prevails amongst life underwriters, that from one-third to one-half of the risks accepted by them as sound, would never have been underwritten, were it possible to have had the applicants in all cases brought to the head offices of the companies, to undergo inspection by the officers and examination by the medical directors, supposing these to have the same knowledge of the habits and surroundings of the applicants as is generally possessed by the local medical examiner and agent. Indeed one officer of a prominent company, to whom the writer applied for information upon this point, gave it as his opinion that, judging from the results in his own company, the object of a medical examination appeared to be, not so much the selection of *good* lives, as to see how *bad* lives could be *squeezed in*. Whether these estimates be correct or not, it is undoubtedly the fact that by all life underwriters the medical examination is considered the *weak spot* in conducting the business of life insurance; or, in other words, that the medical examination of applicants does not afford that protection against the intrusion of unsound lives which it is designed to effect, and which it would effect, if honestly and efficiently performed. Moreover, it must be stated that this opinion of the medical examination as an element in the conduct of the business, does not result so much from a want of confidence in the professional skill of the examiners, as from the absence, too frequently observable, of a certain *moral* qualification, not less essential in the exercise of his responsible duties.

In many cases, more particularly in the country districts, the examiner on the part of the life insurance company is also the family or attending physician of the applicant for assurance. In such cases the physician, if he is a man of honor, will decline to act for the company, or to receive its fee, if a feeling of loyalty to his friend and patron in the least degree interferes with his perfect freedom of judgment in performing the duties expected of him by the company. Even where the relation alluded to does not exist, it is frequently found that a neighborly feeling towards the applicant, or lack of sympathy with the company, consequent upon entire unacquaintance and non-intercourse with its managers, or mayhap through a friendly feeling towards the agent, the company's interests are sacrificed in not obtaining that full information regarding the "health, habits and circumstances" of the applicant, no less necessary to a correct estimate of the risk submitted, than an accurate statement of a careful physical exploration.

It is this want of thorough personal independence,

and lack of sympathy with the views and objects of the underwriters, far more than deficiency in professional ability in those assuming the duties of medical examiners, that is most dreaded by those engaged in conducting the business of life insurance.

The companies have suffered considerably from this cause, and hence the unfavorable impressions entertained in the majority of the offices as to the value of a medical examination.

The existence of this feeling amongst the fraternity of life underwriters is, in the opinion of the writer, matter for grave consideration by the members of the medical profession. He believes that the mortuary experience of the life insurance companies should be a subject of much interest, even solicitude, to the members of that profession. It is not unfair to consider *that* experience in some degree a measure of the ability and integrity displayed by them in their rôle as examiners. All honorable members of the profession have, therefore, a direct interest in protecting the life insurance companies from the losses incident to the incapacity or want of fidelity to the trust reposed in them of some of its members, and should, through *esprit de corps*, if not from purer and more honorable considerations, lend their aid in so doing.

In the careful selection of risks the executive officers of the companies are compelled to depend largely upon the honor and good judgment of the local medical examiners, no less than on their professional skill, aided, as the latter are, in the majority of instances, by their *personal* knowledge of the general health, habits, and local reputation of those proposed for assurance. In judging of the desirability of risks they have immense advantages in this respect, advantages which they are bound, as men of honor and integrity, to use for the benefit of the company whose trusted representatives they are.

The officers of life insurance companies reasonably expect that the physicians whom they employ, and who accept their fee, will be in full accord and sympathy with them; and that they will act and advise with entire independence of all local feeling and influence, no less than with an intelligent understanding of the great influence their decisons exert upon the working out of one of the most beneficent schemes yet devised for the amelioration of the social suffering and embarrassment too often consequent to widows and orphans when death removes their natural protector.

The officers of life insurance companies do not consider that the medical examiner performs his whole duty by giving laconical categorical answers to the printed questions in the certificate prepared for him. Considering him as their trusted and confidential local representative, they desire that his report should not be merely that of the professional expert, but that he should take an interested and *business-like* view of each case submitted to him; permitting his judgment and advice to be freely influenced by the consideration of the important *financial* bearing of his decision. They expect that he will consider the interest of the company for which he acts as paramount to all others, and "resolutely stand like an alert and faithful sentinel, between the company on the one hand, and the unsafe and undesirable risk seeking admission thereto, on the other."

The examining physician is a chief controlling power in the safe conduct of the business of life insurance. Upon his skill, fidelity and independence depends largely the prosperity or even safety of the company for which he acts. Carelessness, incompetency or want of fidelity to his company on the part of the examiner, may injuriously affect the vital interests of thousands of innocent persons. This, surely, is a serious consideration, and should profoundly impress him with the almost sacred trust reposed in his personal honor, no less than in his professional skill.

ON THE LAW OF MORTALITY THAT HAS PREVAILED AMONG THE FORMER MEMBERS OF THE DIVINITY SCHOOL OF YALE COLLEGE.

By PROFESSOR H. A. NEWTON,

YALE COLLEGE.*

A CATALOGUE and biographical record of the persons who have been members of the Divinity School of Yale College, during the fifty years of its existence, from 1822 to 1872, has just been prepared and published by Prof. George E. Day. The materials for the record have been collected with very unusual care, being in almost every case from autograph letters, or other authentic documents. This fact, as well as various other peculiarities of these statistics, make it worth while to look at them with special reference to the vital experience of the persons named in the catalogue.

By the *law of mortality* of a community, or of a large selected group of persons, is usually understood the varying probability of death in that community, or group, for the different *ages* of the members. Thus out of a thousand persons aged thirty, we find that in one year there will be in the mean 8 or 10 deaths; of a thousand aged fifty, there will be from 14 to 19 deaths; of a thousand aged seventy, there will be 60 to 70 deaths. These numbers of deaths for each age of life, accurately found for a community and put in table, express the *law of mortality* for that community.

The law of mortality is not the same for all groups of men. It varies with residence, with occupation, with sex, and with other causes. The law for assured lives is different from that of annuitants; that of scholars differs from that of laborers; that of the clergy from that of lawyers or doctors. The law deduced from observation in one year, might be expected to vary from that of another year, if the prevailing diseases differ. The law for American lives must differ to some extent from that for English lives, and both differ from that for German or French lives. Such differences, of course, though real, are often quite small.

The graduates of this Divinity School form a class in some respect peculiar to themselves. Most of them are preachers, and the larger part of the rest are teachers, or are at other work in which the risks of disease and death are like those in the ministry. The effect of care and forethought in prolonging life is nearly the same for them all. The medical selection of assured lives has given a peculiar character to all the tables deduced from the experience of insurance companies, but from such an effect the statistics of this catalogue are nearly free. Although, therefore, the number of years of experience is not large, being less than 20,000, and the number of deaths less than 200, it seems worth while to see what evidence they furnish about the law of mortality among such lives in our country.

* The original article appeared in the April number of the *New Englander*, a quarterly journal published in New Haven, Conn. As very few of those interested in the subject will be likely to see the *New Englander*, we have reprinted the article in the form of a pretty full extract.

In the treatment of the data I have proceeded as follows: each person who has belonged to the school is regarded as coming under view on the day of Yale College Commencement of the year in which his class finished its course. The risk (to use a technical term) begins on that day, and his name continues on the list until the anniversary of that commencement next following his death, if he is dead, or till that day in 1872 if he was then living. By this rule the students who die while in the seminary, that is before the Commencement of the year of graduation of their class, are thrown out of our account. Against this, of course, are thrown out also the years of favorable experience of the students who survive. Each name belongs in the group an exact number of years.

It was assumed also that the Commencement day named is to each person his birthday, and that the completed year of his age on that day is the age attained upon the *nearest* birthday, before or after. That age was written opposite each man's name in a copy of the catalogue. Along with this was also written the age just attained on the corresponding day of 1872, if he was then living; and if dead, the number of the *unfinished* year of age, the birthday being assumed as before.

If the statistics had been complete, this process would give us the means of getting completely the vital experience. How shall we treat the cases where the facts are not all given? We cannot throw out such names, for these records are in many cases incomplete *because* of the death of the persons, and in other cases we know about a man *because* some one has written an obituary notice of him. It is better to retain all cases in which we can assume without serious error the dates and ages needed to make the data complete. Thus for three or four persons the year of birth without the day is given. For thirteen persons the age is obtained from the matriculation records of Yale College. Six persons, who are doubtless living, were last heard from in 1870 and 1871. The risk upon their lives ceases with those years. One person is reported dead, but the year is unknown, and I assume that he lived half of the time from graduation till 1872. Five deaths are reported in given years, but the month and day are not told. For them, the first of January is made the assumed birthday, and fractions therefore appear in the columns of the deduced tables. In one important case the death occurred in the year of graduation, whether before or after commencement is not known. I have added a fraction (0.36) in the years of risk, and a like fraction in the column of deaths.

Of 41 persons the birth year is not known. The average of 771 known ages, at the time of finishing seminary studies, is 27.7 years. The remaining 41 persons are without doubt older, as many of the persons are reluctant to tell their ages. I believe the error will not be large if I assume them to have been on an average 29 years old.

There are seventeen persons of whom we have no recent satisfactory information. Six of them have been heard from at an average of more than 10 years after graduation. This group, about two per cent. of the members in the catalogue, I have left out entirely. Perhaps we have not heard from them because they are dead; perhaps because they are not dead. To balance any greater chances of the former kind may be set off their sixty-three years of known favorable experience. If the experience of these seventeen persons can be learned, and if it shall prove to have been more or less favorable than that of the rest of the graduates, the following conclusions will need correction by about two per cent. of the difference.

In Prof. Day's catalogue there are 854 names. Eight died before finishing their studies, seventeen are not heard from, and seventeen were of the class of 1872. This leaves 812 persons, of whom 771 were of known ages, and 41 of an assumed age.

[Prof. Newton then compares the mortuary experience of these 812 former members of the Yale Divinity School with the experience of 20 English Life Assurance Companies, and shows the results in the following condensed table.—Ed.]

Ages.	No. of years of risk.	Expected mortality.	Actual mortality.
21—26	333.4	2.5	2.
26—31	2281.	17.8	25.
31—36	3439.66	29.1	28.36
36—41	3182.3	30.5	30.
41—46	2867.4	32.5	23.6
46—51	2472.4	34.8	17.4
51—56	1960.	36.0	17.
56—61	1311.8	32.9	29.
61—66	690.	24.9	13.
66—71	292.	15.0	8.
71—79	83.	6.4	4.
Total,	18912.96	262.4	197.36

Up to an age between 40 and 45, the total expected and actual mortality are equal. Above that age the actual mortality is about three-fifths of the expected.

It should perhaps be noticed in passing, that the standard table was made from all assured lives, that the benefits of medical selection in the early years were not eliminated, and that therefore the table to that extent does not express the law for common lives. The only fact that implies a corresponding influence of *selection* in the group of lives we have been considering, is that each person had health enough at some time during the three years before entering the group to begin seminary studies. Other causes, I think, belong to the law of mortality of the group.

That mortality among the clergy was less than among men of equal ages in other occupations has been well known. Mr. Neison, in a very important and interesting article upon the influence of occupation upon health, as shown by the mortality experienced in England and Wales in 1860 and 1861, gives the following percentages of mortality per annum for males in the classes and occupations named. I select a few among similar figures:

	Ages, 25—65.	25—45.	45—65.
Total population	1.50	1.05	2.30
Coal Miners	1.48	1.10	1.82
Copper miners	2.47	1.40	3.17
Blacksmiths	1.38	95	1.61
Butchers	1.74	1.20	1.98
Beer Sellers, Wine Merch'ts, Innkeepers	2.44	1.70	3.32
Clerical profession	1.04	52	1.72
Legal "	1.51	91	2.24
Medical "	1.77	1.28	2.35

To discuss causes is outside my purpose. I close with one remark upon a money aspect of the subject. The law of mortality among the clergy is probably such that the actual cost of life insurance is less for them than for men in other occupations. If the exact amount of the difference can be shown they are justly entitled to the benefit of it, and the insurance companies would undoubtedly in some way give it to

them. But before the companies can justly make such a concession, the law of mortality for the profession among the several denominations in this country must be better known than at present. Is it not worth while for the clergy to collect the facts needed to make such a table of mortality.

IMPERFECT REPORTS OF MEDICAL EXAMINERS.

BY A MEDICAL DIRECTOR.

One of the principal difficulties which the Medical Director of a Life Insurance Company meets with in the discharge of his duties, is the lack of clearness and precision in the returns of the medical examiners. If a little more attention were given to these points during the examination, the character of the risk might be determined at once in the home office and a vast expenditure of time and labor saved. Every day these imperfect reports are received by the company only to be returned by the next mail for further and more satisfactory information. There is no part, however, of the examiner's report where the information is usually so unsatisfactory as that relating to the family history. In this connection we would venture to state that the companies themselves are in many instances to blame. Their examiner's blanks are worded in such a way that a careless or even a moderately careful physician may very readily convey wrong impressions to the home office. In many of these printed forms the question of family history is provided for with great care in the application, but in the examiner's report the simple question, "Is there any hereditary taint in the applicant's family history?" is regarded as amply sufficient. If the physician is fully alive to the responsibility of his position, this simple question will suffice, for it will lead him to cross-examine the applicant thoroughly in regard to the diseases that have carried off parents, brothers or sisters, or are still afflicting them. Many physicians, however, will simply ask the applicant whether any case of consumption, scrofula, cancer or insanity has ever occurred in his family, and will rest satisfied with an answer in the negative. We are satisfied from experience that in many cases this negative answer will fail to convey the truth to the home office. The applicant, who probably knows nothing about medicine, repeats exactly what the attending physician has told the family. When asked, for example, what his father and mother died of, he may say in the one case "fever," and in the other "childbirth," which for him are two good and sufficient causes. The applicant is perhaps a perfectly honest man, and may have no suspicion that there is anything wrong about his family history. A little further questioning is then done by the physician, and the facts are elicited that the father had been suffering for several months from "asthma and general debility," and finally died with what the attending physician called a "fever." The mother lingered on for three or four months after the birth of the child, gradually losing her strength, and finally died from the effects of "childbirth." To the medical director these few facts seem to point clearly to consumption as the real cause of death of both parents, and he accordingly rejects the applicant, whom the medical examiner describes as personally a first-class risk. In the same way "lung fever," "pleurisy," and similar expressions often prove to be synonymous with consumption.

We have no radical remedy to offer for this trouble, but would simply suggest that instead of relying for the family history upon the statements in the application, the companies should look to their medical examiners for these details, which can only be correctly determined by a professional man. The subjoined blank, incorporated into the medical examiner's report, would perhaps serve to furnish the home office with more correct information than they now receive and would spare them much needless work.

FAMILY HISTORY.

	Age, if living.	Condition of health.	Age at death.	Disease.	How long sick.	Previous health.
Father						
Mother						
Brothers						
Sisters						

Original Lectures.

ON ATROPINE.

A LECTURE DELIVERED AT THE WOMAN'S COLLEGE OF THE N. Y. INFIRMARY.

By MARY C. PUTNAM, M.D.,

LECTURER ON MATERIA MEDICA AND THERAPEUTICS.

PART I.

LADIES:—In inaugurating this year's course of lectures, I must first point out to you a certain change that I have made in our programme;—a change which will cause it to differ materially from that of corresponding courses delivered at other schools in this city.

Last year, imitating the system that I believe generally prevails in this country, the lectures on Materia Medica and Therapeutics were combined, and both attended by all the students, whether these had been studying one, two, or three years. On this account, students at the very outset of their career were compelled to listen to accounts of the remedial action of drugs, that their ignorance of pathology rendered completely unintelligible to them; and, on the other hand, others, preparing to graduate, were obliged to review details in the chemical and pharmaceutical history of medicines, when these, in comparison with the urgent interest offered by their therapeutical properties, could not but seem dull and unimportant. Moreover, such students, having passed through no preliminary training, were plunged immediately into one of the most complex and difficult studies in the entire range of human sciences—that of the action of drugs on the living organism in health and disease. A science that requires as basis a minute and comprehensive knowledge of physiology and pathology, was thus attacked by persons who as yet were only furnished with the most slender modicum of such knowledge. As a necessary consequence, the true complexity of the subject was ignored, and knowledge of the action of drugs resumed in a few bald formulæ, whose simplicity, no less than their rigidity, rendered them entirely insufficient as guides in the labyrinth of therapeutical problems.

As such system of instruction was illogical, I have not hesitated to set it aside, though supported by so much example and precedent. This year, therefore, the course will be divided into two distinct sections. The first year students will be invited to the study of materia medica; to familiarize themselves with the properties of drugs in their natural and commercial condition; afterwards to trace them through their various pharmaceutical preparations, many of which they will have an opportunity of fabricating themselves. They will learn the origin, the botanical and chemical classification, the chemical constitution and physico-chemical properties of drugs, before attempting to rise to the contemplation of their properties in relation to vital organisms. By this means they will thus: 1st, acquire certain knowledge which otherwise they are only assumed to possess; 2d, be trained for the acquisition of other knowledge which they must in great measure miss, if they have not been previously prepared to receive it by exercise in simpler studies.

The second and third year students will study, in a two years course, the physiological action and therapeutical application of drugs. As far as possible each proposition will be illustrated by experiments made upon animals in our laboratory, or by the treatment of patients selected from our clinics.

I will express the hope that, before long, our school will accept the standard of Europe, and create a chair of materia medica entirely distinct from the chair of therapeutics: that, further, each of the seven primitive chairs will be divided into an elementary and an advanced section. Until this is done, *all* medical education will remain elementary, and the very conception of a superior education will continue to be ignored.

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I have selected atropine as the first subject of this year's studies, because the researches that have been made in regard to it afford a complete type of those that should be pursued in regard to every reputed remedial agent. It is necessary, 1st, to observe the succession of phenomena produced by such agent after its introduction in a healthy organism; 2d, to analyze each of these phenomena to its ultimate elements; 3d, to compare the effects of the drug upon organisms involved in various morbid conditions, with the results obtained from such analysis.

In the first place, therefore, we have to consider the general tableau constituted by the physiological effects of atropine . . . . ; and the first phenomenon that demands analysis is the effect of atropine on the pulse.

There is no doubt that atropine accelerates the pulse. But in regard to this acceleration we must ask the following questions:—

1st. Is this acceleration immediate or secondary? According to Harley and Meuriot, the pulse is *immediately* accelerated after the administration of atropine; this acceleration is indeed the first effect produced. According to Schroff, Posner and Nothnagel, the pulse is first lowered, and afterwards accelerated. According to Bezold, the acceleration is immediate after subcutaneous injection, secondary after ingestion of the poison. In Bezold's experiments upon guinea-pigs and dogs, an acceleration of from 14 to 48 beats frequently occurred during the first minute, or even quarter of a minute. In one dog, the pulse rose suddenly from 80 to 240 beats in a minute. In these cases the atropine had been injected into the facial or external jugular vein.

Harley's observations are less reliable, because not made until ten minutes after the injection.

In the three cases where we tested the action of atropine on human beings before your eyes, we observed a fall of the pulse within ten minutes. In the first case the patient was a delicate, lymphatic, but not nervous woman, to whom one-fiftieth gr. of sulph. atropiæ was given by the mouth, the pulse then being at 96, probably from some emotional excitement. In ten minutes the pulse had fallen to 80, and remained at 80 to the end of an hour, notwithstanding the occurrence of other symptoms of atropism, a slight flushing of the face, dryness of mouth and throat, and very slight dilatations of the pupils. In the second case the subject was a rather robust woman in good health. The pulse being at 80, one-fiftieth gr. sulph. atrop. was given by subcutaneous injection. In seven minutes the pulse had fallen to 68. In fifteen minutes came a dryness of the throat and slight giddiness. In twenty minutes the pulse had risen to 104. This rise may have occurred at fifteen minutes, as at that time the pulse was not examined. In the third case, after hypodermic injection of $\frac{1}{50}$ grain, the pulse fell in five minutes from 92 to 80, in 10 minutes rose to 100, in 20, to 104.

You see, therefore, that both these cases contradict Bezold's statement, that the acceleration is *always* immediate after subcutaneous injection, and always secondary after ingestion; for in the cases of injection the acceleration, which was notable, was pre-

ceded by a marked diminution, and in the case of ingestion the pulse fell, and did not again rise. But in this case the subject belonged to a class that we shall find, for reasons to be hereafter noticed, is rather insusceptible to the action of atropine, and therefore the dose was too small. The other cases, on the other hand, fairly represent habitual conditions. This initial fall of the pulse is more certain to occur in human beings than in dogs, whose cardiac susceptibility to atropine is very great. It is also to be expected from subcutaneous injection rather than from an injection into veins. This phenomenon is too transitory to be of any value therapeutically, but physiologically it is extremely interesting, in connection with another atropine effect of which we shall presently speak,—I mean the contraction of the small arteries.

2d. At what doses does atropine determine an acceleration of the pulse?

On this point there is unanimous testimony. The heart's action is accelerated by *small* doses, and slackened, on the contrary, by large. In guinea-pigs, from 0.0005 to 0.02 accelerated the heart from 4 to 12 beats in 15″; while 0.05 lowered the pulse in one case from 70 to 44, in another from 80 to 58. With 0.10 the pulse first slackened, then stopped in about a minute (Bezold).* In the horse, with one-twelfth of a grain, there was acceleration of the pulse 10 beats in 35 minutes; with one-sixth, acceleration of 24 beats in 17 minutes; with ¼, acceleration of 56 in 12 minutes: and this was the maximum acceleration obtained. With ½ grain it was 42 beats in 12 minutes, and with 2 grains 35 in 15, or 37 in 20. Similarly on the dog, with $\frac{1}{100}$ grain pulse rose from 120 to 300 in 14 minutes; and $\frac{1}{50}$ and $\frac{1}{25}$ grain produced the same effect; but with $\frac{1}{10}$ the pulse was 400 at the end of 1½ hours. In man there is said to be an acceleration of 20 to 25 beats with $\frac{1}{120}$ or $\frac{1}{90}$ grain; 20–60 beats with $\frac{1}{60}$ grain, 20–70 with $\frac{1}{40}$, and only 30 with $\frac{1}{20}$ of a grain (Harley).† Meuriot noticed an acceleration of 84 beats in 90 minutes after an injection of 0.001. Nevertheless, with toxic doses, the pulse remains extremely frequent until an advanced period of the coma. In Behier's case,‡ where an old man of 75 had taken 0.013 of sulph. atropiæ, the pulse was 108 in three hours, at the beginning of profound coma, and rose afterwards and beat at 120 all night, and until return of consciousness. In a case quoted in *Amer. Jour. Med. Sciences* for 1866, from Schmid,§ after ingestion of ¼ grain of atropia, and during period of excitement, the pulse was 130. On the other hand, in the famous case of Dr. Angelo Poma,‖ when a profound coma had set in 2½ hours after the ingestion of f ʒ j. of solution of extract of belladonna, the pulse was extremely slow. In several other cases of poisoning it is recorded that the pulse was weak and depressible, though the number of pulsations is not given. In Lee's cases of poisoning with the analogous mydriatic, stramonium,¶ the pulse was from 100 to 150 in the two men patients, who were comatose when treatment commenced; and 140 in the woman, who was in a state of maniacal excitement resembling delirium tremens. The pulse only sinks immediately and permanently when injected into the jugular vein, a condition that evidently is never reproduced in man.

By ingestion or subcutaneous injection, and after the initial slight fall, the pulse is therefore always accelerated; and this acceleration, though not in exact proportion to variations of physiological doses, is excessive in those doses where it will ultimately or rapidly be succeeded by slackening. (See also Schroff* and Meuriot.†) This fact is important to remember, in interpreting certain details of the reactions of belladonna in cases of opium poisoning. By it we also test the value of the assertion made by Lemaitre,‡ and supported by another, quoted by him from Lensana,§ that the effect of atropine upon the pulse is only slightly appreciable.

3. How is the pressure in the arteries affected during the atropine acceleration of the pulse? Marcy has formulated the following law:—"The frequency of the pulse, or of the cardiac contractions, is in inverse relation to the degree of arterial tension." It has been said, on the other hand,‖ that Ludwig and Thiry have formulated another law, precisely the reverse of this: "The frequency of the pulse increases *with* the arterial tension." In both cases the arterial tension is taken as the point of departure, and its rise or fall declared to be a *cause* of the acceleration of the heart's action. This quotation, however, is not quite incorrect. According to the exposition of Ludwig's views, made in a memoir of Bezold,¶ and also in another of Pokrawsky, after an increase of the blood-pressure, the pulse was sometimes quickened and sometimes slackened. This, whether the increased pressure was determined directly by closure of the cœliac and renal arteries, or indirectly by irritations of the spinal cord or splanchnic nerves. Thus Ranke, who admits that an acceleration of the pulse takes place when the arterial pressure is increased, observes that it occurs likewise when this is diminished, but when the force of the heart is diminished even more rapidly than the resistance in the arteries.**

It is evident that arterial tension may be increased, either when more blood is thrown into the arteries by greater force of the heart's action or when an obstacle exists to its efflux. An agent that, like cold, excites the active contractility of the small arteries, by accelerating the peripheric circulation, necessitates the acceleration of the heart's action. The tension of the blood-vessels rises, but the rise is the consequence, and not the cause, of the quickened pulse. With any condition that weakens at once the blood-vessels and the heart, as fever, or the action of certain narcotics, the tension will be lowered, yet the heart accelerated, while the vessels are passively dilated. Both the acceleration and the lowered tension depend on the insufficiency of the cardiac contractions. With bromide of potassium the small arteries are completely constricted, the tension raised (?), and the pulse lowered. With atropine, the arteries are partially constricted, the tension raised, and the pulse accelerated. Only at the very beginning the pulse falls, and this before any effect has been produced on the small arteries. The acceleration of the pulse coincides with acceleration of the local circulation, from the increased active contractility of the arteries. As this local acceleration is sufficient to compensate the degree of obstacle caused by the constriction, the rise of tension cannot be explained by that, but by the rapidity with which the arterial system is filled.

In Meuriot's experiments upon man with atropine the

* Ueber die Physiol. Wirk. des Atropins. Leipzig, 1867.
† Old Vegetable Neurotics. London. 1869.
‡ Union Medicale. 1869.
§ Klin.
‖ Gaz. Hebdomadaire. 1863.
¶ *Amer. Jour. Med. Science.* 1862.

* Schmidt's Jahrbücher, Bd. 76. 1852.
† Meuriot. These sur la Belladone. Paris, 1865.
‡ Archives Generales. 1865.
§ Union Medicale. 1851.
‖ Chauvet De la Circulation Capillaire. Thèses de Paris. 1869.
¶ Untersuchungen uber die Herz und Gefässnerven der Säugethere 1867.
** Lehrbuch der Physiologie des Menschen. 1872.

ine of ascent in the sphygmographic trace (percussion troke of Mahamed*) remained vertical, but was not so igh as normal. This would indicate that the arterial onicity was increased, while the heart had not lost ny of its vigor. At the same time, the line of descent vas not separated by any appreciable interval from he upper stroke, showing that no obstacle existed to he efflux of blood into the capillaries. This rise in re tension was first noticed in 15 minutes after injection of 0.001. ($\frac{1}{100}$ gr.) and had increased in 30 minutes, the pulse quickening at the same time. In ne observation, where 0.012 were injected and the race taken in 40 minutes, the vertical up-stroke had allen still lower, and there was moreover a rounded ummit, as if with this dose and at this time, the efflux of blood was somewhat obstructed.

When the tension in the carotids was measured in ogs by a hæmometer, the pressure rose with a subutaneous injection of from 0.005 to 0.05 sulph. atroine ($\frac{1}{200}$ to $\frac{1}{10}$ gr.) This was the limit within hich the pulse rose. With injection of 0.10 ($1\frac{1}{2}$ gr.) ne pulse and the arterial pressure fell together.

Similar experiments by Bezold gave similar results. n the cases already mentioned, where the dose administered caused an acceleration of the pulse, it generally caused an increase in the blood pressure also, ut in one case (Guinea-pig) this sank from 92 to 72 illimetres during the injection, and did not recover s original level until 30 minutes after, although the ulse was slightly accelerated. In another, where 0.30 ere injected into the facial vein of a dog, the pulse ose in $\frac{1}{4}$ minute after the injection from 60 to 192; nt the pressure in the carotid sank from 140 to 20. n this curious experiment, the dog was killed by successive doses of atropine (he received in all 0.80);—tificial respiration was practised and the abdomen ened. This operation generally lowers arterial tenon, but in this case it rose to 30 (having sunk to 5), hile the pulse beat 168 times in the minute.

From these experiments it appears, that with moderate acceleration of the pulse during first stage of atropine the pressure rises;—h the excessive acceleration of sudden toxic ses, of coma;—of ultimate paralysis, in a word,—pressure sinks. We think that it may be thence erred, that in atropinism the pulse is not accelerated ause the tension is increased, but that the tension is reased because the pulse is accelerated, the heart at same time retaining its vigor, and thus, in a given e, throwing more blood into the arteries. In the palytic stage the heart contracts as rapidly, but with nt feebleness; at the same time also there is paraic widening of the blood-vessels, so that a double rence exists to lower the tension. These details of special interest, in comparing atropinism with results of section and galvanization of the pneumastric nerve.

h. Thus we see that the heart's action is accelerby atropine in extremely small, *i. e.*, therapeutical s; that this acceleration occurs immediately in , after a slight initial diminution in man, and is mpanied by increased arterial tension. Upon does this acceleration depend? The pulse is acated,—1st, when the muscular fibre of the heart is tly stimulated by a greater afflux of blood, itself mined by increased respiratory movements.

. Similar direct stimulus is felt by the intrac ganglia, controlling the rhythm of the heart's ments.

3. Acceleration also occurs when the cervical sympathetic or cervical spinal cord from which it is given off is galvanized.

It is well known that the modus operandi of this influence is the subject of a famous dispute, to which we have already made allusion. According to Bezold and Pokrawsky,* the influence is direct, and galvanization of the nerve acts immediately upon the muscular fibre of the heart to which it is distributed. According to Ludwig and Thiry, the influence is indirect, and dependent upon variations in arterial tension. Galvanization of the sympathetic or of the cervical cord causes the contraction of whole territories of blood-vessels, even those of the mesentery. This still occurs, when the cord is galvanized, after all the nerves going from it to the heart have been cut, and according to Ludwig, in that case the pulse is still accelerated. But Bezold and Pokrawsky affirm, on the contrary, that in this case the acceleration of the pulse is *much less marked* than when the nerves are intact. The contraction of the blood-vessels still occurs, but the direct stimulation of the heart is wanting. The three observers, however, it is seen, agree in ascribing a certain amount of acceleration of the pulse purely to the rise of arterial tension determined by constriction of the blood-vessels—contrary to the theory of Marey. According to Bezold's theory, if atropine stimulated the sympathetic in the heart, as it does in the small arteries, the heart would be directly accelerated, by stimulation of its accelerating nerves. According to the other theory, any stimulation of the cervical or cardiac sympathetic would merely reinforce that directly exercised upon the blood-vessels by the local contact of atropine. The only way to prove a direct influence upon the sympathetic is to isolate the heart by a section of the pneumogastric, and then administer the atropine. But the acceleration of the pulse after this operation is already so great, that such acceleration as might be produced by stimulation of the sympathetic would be entirely masked. It is certain that when atropine is injected after section of the pneumogastric, the acceleration of the pulse is not further increased.

The constriction of the small arteries sometimes coincides with an accelerated, sometimes with a slackened pulse. Sometimes, as in Ludwig's experiment, where the cervical cord is galvanized after section of the sympathetic nerves going to the heart, this constriction seems to be the only cause of the acceleration of the heart's action, and the acceleration is not very marked. Sometimes, as after administration of bromide of potassium, the small vessels are strongly contracted, but at the same time the pulse falls. The same coincidence is shown in an observation of Pokrawsky's. When carbonic oxide gas was injected into the veins or inhaled, the small arteries, stimulated by blood deficient in oxygen and too rich in carbonic acid, contracted: at the same time, the pulse and tension fell "from coincident irritation of the medulla and vagus."

But the active partial contraction of the small arteries determined by atropine, with increased local circulation, is quite different from the complete contraction caused by bromide of potassium or carbonic oxide or carbonic acid gas. If the blood flows more rapidly at the periphery, the heart must contract more rapidly. Hence in this way the stimulation of the sympathetic produced by atropine would be one cause of the acceleration of the pulse. Whether there is also a direct stimulation of the fibres going to the heart we cannot consider at present as determined.

4th. The most powerful means of acceleration of the

* *Med. Times and Gaz.*, 1872.

* Ueber das Wesen der Kohlenoxyd Vergiftung.—Dubois und Reichert's Archiv, 1866.

heart's action is well known to be section or paralysis of the pneumogastric nerve; after this operation the pulse rises immediately to double and quadruple its previous speed. Now, the remarkable acceleration of the pulse that follows the injection of atropine can only be compared to that determined by section of the pneumogastric. It is also most noticeable in those animals, as dogs, upon whom section of the vagi produces the most marked effect on the pulse. The tension rises after atropine, as after section of the pneumogastric. As already noticed, if the pneumogastric be severed previously to the administration of atropine, the acceleration of the pulse is not further increased, as if the agent upon which the atropine usually acted had been suppressed by the operation. Finally, if the vagus be cut in an animal previously atropinized, galvanization of its peripheral extremity will no longer produce cardiac tetanus. The electrical excitability of the sympathetic remains intact. From these facts, we think the inference * is indeed justified, that atropine accelerates the heart's action, by partially paralyzing the pneumogastric nerve.

At the same dose, however, atropine, as we have seen, has no appreciable effect on the respiration. Hence the main trunk of the pneumogastric nerve cannot be paralyzed, for in that case the respiration would be interfered with in the ordinary manner. Moreover, when the atropine is injected into the carotid, and sent towards the brain, the pulse is at first slackened, until time enough has elapsed for the poison to be distributed throughout the body, and reach the heart. But if it be injected in the jugular vein, the acceleration is immediate, and much more marked than by ordinary subcutaneous injection.

Hence we may infer that the atropine acts upon the cardiac peripheric extremities of the pneumogastric nerve, partially paralyzing them; that this is the first cause of the acceleration of the heart's action. A second is the stimulation of the sympathetic nerve, possibly in the heart, but certainly in the small blood-vessels. The circulation in them is more rapid, blood passes more rapidly to and through the heart, hence directly stimulated to increased activity. This double mechanism is the first in which the action of atropine resembles that of fever. Other similar coincidences are the slight rise of temperature, the slight increase in the excretion of urea, and the diminution of secretions to which we have called your attention.†

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In speaking of the anæsthetic properties of atropine, it is necessary to recall Botkin's experiments,‡ and the inference that this observer draws from them, namely, that atropine primarily paralyzes the motor nerves. These experiments were made upon frogs, and with overwhelmingly large doses, and the influence of diffusion was not taken into account. In order to exclude this cause of error, the vessels and nerves of the frog's leg must be isolated, and a ligature passed round the soft parts so tightly, that the poison, injected under the skin of the other limb, cannot diffuse through the cellular tissue, but can only reach the nerve by the artery. In a limb so prepared, after administration of atropine, the sensibility is diminished, the motility remains intact, while on the other leg, where diffusion has taken place, both are diminished equally.§ If the ligature embrace not only the cellular tissue, but also the artery, no effect on the nerve will follow the injection of atropine. This shows that the poison anæsthetizes the periphery of the nerves, and not their roots or the nervous centres. For in this second case, as in the others, it has full access to these parts, but, by ligature of the artery, fails to reach the periphery of the nerve. No anæsthesia results, though this supervenes as soon as the circulation in the limb is restored.

The peripheric localization of the action of atropine is shown also by another fact. In a limb under the influence of atropine, an electrical current directed to the skin (or the extreme periphery of the sensitive nerves) causes no sensation. If the same current be directed to the trunk of the sciatic, evidence of pain is obtained. Moreover, reflex contractions occur, first in the same leg, afterwards in the opposite limb, showing that the conductibility of the centripetal fibres is intact.

The motor nerves are only indirectly affected; that is, after diminution of the sensibility, there is necessarily diminution of reflex contractions. But at this time, *direct* irritation of the motor trunks produces as strong contractions as in a normal condition.

That the spinal cord is not primitively affected seems shown by the following experiment:—A ligature is passed tightly around the body of a frog, so as to separate the anterior from the posterior limbs. Atropine is then injected under the skin of the anterior half. At first, irritation of any part of the body produces reflex contractions; but as the sensibility of the nerves in the anterior half diminishes, irritation in *this* region remains without response. But irritation of the posterior half still produced contractions in the four limbs. This shows that the excited motor power of the cord has remained intact, for it is the only medium of communication between the part irritated and the parts set in motion.

Upon the voluntary muscular fibre, atropine has even less influence than upon its motor nerves. With the unstriped muscular fibre, however, it is different. We have seen that, by stimulating the vaso-motor nerves, atropine stimulates the contractility of the muscular fibre in the arteries. According to Meuriot and Ormus, in a rabbit killed after administration of a non-toxic dose of atropine, the movements of the intestine, always observed when the abdomen is opened, are exaggerated, and they infer that the muscular fibre is excited by the atropine. Fleming has come to a similar conclusion, from studying the action of atropine on worms. Bezold has observed, on the contrary, that the intestine of the rabbit remains perfectly still, but this is only after very large doses.

In regard to the unstriped muscular fibre of the intestine, as in striped muscle, it is necessary to separate the action of atropine upon muscular fibre from that upon the nerves, and upon two kinds of nerves, the ganglionic and the splanchnic. In this connection Kenchel's experiments are very interesting.* Two cats were selected, similar in size, and in both the splanchnic nerves were cut before their junction with the solar plexus, and below the diaphragm. Then one of the cats was poisoned with 0.005 of atropine. Both animals were then killed, and on opening the abdomen immediately after death, the peristaltic movements of the intestine were observed to be increased. If now, on the cat that had received no atropine, an electrical current were sent through the splanchnic nerve, this peristaltic action is immediately arrested, just as the heart's action is arrested by galvanization

* Meuriot, Bezold, Botkin, loci cit. Conclusion contested by Harley; but it is difficult to see on what grounds. Huseman, on the contrary, indorses this view.

† In a part of the lecture not deemed necessary to quote.

‡ Archiv. Virchow, Bd. 24.

§ Result of personal experiment.

* Schmidt's Jahrbücher, Bd. 143.

of the vagus.* But in the cat that had received atropine, the electrical excitation of the splanchnic produced no effect whatever; the movements continued. The atropine therefore seemed to act on the intestine by stimulating the ganglionic nerves and disseminated ganglia, which provide for the dilatation of vessels; and by paralyzing the splanchnic nerves, which, by tending to contract the blood-vessels, tend to restrain and tonify the contractility of muscular fibre. The opposition is analogous to that between the pneumogastric and the sympathetic in the heart, and the action of atropine is similar in the two cases.

Precise knowledge of the mode of action of atropine upon muscular fibre is especially important for arriving at a true theory of its action on rigid sphincters, where it has been so often employed therapeutically. The usual expression, "Belladonna *relaxes* the sphincters," is extremely vague, and conveys several ideas more or less false, among others, that of *paralysis* of the muscular fibre. I would venture to suggest that a sphincter grown rigid under irritation, *e.g.*, an os uteri during parturition, is, properly speaking, *tetanized*. It is a remarkable fact that tetanic contractions are always the result of a peripheric and consequently reflex irritation,† as is well known clinically, and may be demonstrated experimentally. In a rabbit upon whom I had made a hemi-section of the spinal cord, irritation of the limb on the side opposed to the section determined tetanic contractions in the limb on the same side. But direct irritation of the gray substance of the cord determined *clonic* convulsions in the adjoining muscles and in the limb.

Tetanus is not analogous to normal contractions,‡ but to cadaveric rigidity, which occurs earlier in tetanized muscles than others. In this state the fibre is shortened and broadened, and as it loses its power to contract in proportion to its shortening,§ it really remains passive and motionless, molecular nutrition is arrested, and the coagulation of undecomposed myosine around the fibre is considered by some observers, in tetanus as in permanent death, to concur at least with change of electrical conditions in the preservation of immobility. The whole chain of sequences is broken when the initial irritation is destroyed. The anæsthesia of the peripheric nerves determined by belladonna allays this irritation, arrests the transmission of exaggerated impressions to the spinal cord, and hence the overwhelming motor excitation that had been sent from it. At the same time, by quickening the local circulation the atropine may facilitate the removal of coagulated or waste substances clogging up the substance of the muscle.

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In regard to the mechanism of the mydriasis determined by atropine, you will still frequently hear it ascribed to a "stimulation of the dilating, radiating fibres of the iris." Even Stellwag, after adducing a great many facts that speak in favor of another theory, concludes by ascribing to atropine a double function. On the one hand it paralyzes the motor ocular nerve, but on the other it "stimulates the nerves distributed to the muscular fibre in the dilator papillæ,—and also in the coats of the blood-vessels." * The existence of the dilator is accepted on the authority of Koelliker, Valentin, Merkel; the distribution to it of the sympathetic nerve is inferred from the effects upon the pupil of section or irritation of that nerve.

You know that when this section is made the pupil instantly contracts, and when the peripheric extremity of the severed nerve is galvanized, the pupil dilates again. The contraction of the pupil after section of the sympathetic is supposed to result from paralysis of these fibres, and to the exclusive predominance of the circular fibres controlled by the motor oculi.

Galvanization of the cervical cord produces as much dilatation of the pupil as if the current were directed to the nerve itself. Now galvanization of the cord which is everywhere followed by contraction of blood-vessels, contracts the blood-vessels in the iris as well.† On the other hand, paralysis of the vaso-motor nerves from section of the sympathetic dilatation of blood-vessels in the iris, as in the head where the temperature rises, is followed by visible enlargement of its tissue and diminution of the pupil.

Stellwag insists on many facts that show a constant association between modification of the vascular tissue of the iris, and changes in the diameter of the pupil. Besides the results of galvanization of the cervical cord and of the sympathetic quoted above, he observes that mydriasis is always accompanied by a tumefaction of the ciliary processes, whose size diminishes during myasis. In the first case blood is passed out from the iris, in the second case, it flows back again to it. Ligature of the common carotid is followed immediately by contraction of the pupil,—an effect of the irritation of the brain from sudden anæmia. But the secondary result on the eye is dilatation of the pupil, when the irritative effect has passed away, and the vascular tissue of the iris finds itself emptied. "Did not such mighty authorities speak in favor of a special dilator of the pupil, we should be inclined to believe that the sympathetic was distributed to the walls of blood-vessels only, and that variations in the size of the pupil were due exclusively to variations in their diameter." (Loc. cit. p. 79.)

The *suddenness* with which the pupil contracts after section of the sympathetic shows that an effect of irritation precedes the paralysis of the vessels, which occurs more gradually, though still rapidly. This sudden contraction is due to a reflex irritation of the encephalon, propagated thither by the central extremity of the sympathetic. It is analogous to that which may be determined by any irritation of the brain, especially of the tubercula anadrigemina, or crura cerebelli, or by the ligature of the carotid.

The contraction of the pupil is not determined by opposite but by different influences from that which causes its dilatation; it is to be expected, therefore, that it should be effected by a different apparatus. In all the active physiological functions of the iris, the pupil contracts. For no purposes of vision does it dilate actively; in obscurity, or in vision of distant objects, the dilatation is caused by simple relaxation of the muscular fibre of a sphincter, from which the normal stimulus had been withdrawn. It is in these cases moderate, and not to be compared to the widening determined by atropine, or by galvanization of the cervical sympathetic, an operation which always constricts the blood-vessels, but only occasionally affects the retina. Any such effect that is produced is irritative, and man-

* As galvanization of the splanchnic is known to contract the blood-vessels, and as the exaggerated movement of the intestine is known to be due to the rapid formation of carbonic acid, when the abdominal vessels are exposed to the air, it seems probable that the movements are arrested because the supply of blood to the muscular fibre is suddenly diminished.

† Traumatic tetanus, of course. Strychnia tetanus seems to be of a different nature.

‡ This fact corresponds to that observed by Legros and Onimus, where direct irritation of certain parts of the gray substance increased the convulsive movements in choreic dogs. Also with the clonic convulsions of epilepsy.

§ Brown-Séquard, Journal de Phys., 1859.

* Stellwag. Der Intraoc. Druck. Wien, 1868. P. 93.

† Stellwag. Loc. cit. p. 76.

ifested by flashes of light; hence if the contractility of the iris as a muscular membrane were called into play at all, it should be to diminish the pupil, as it does physiologically whenever the retina is irritated. But the reverse occurs—already a proof that the dilatation does not depend on the muscular elements immediately connected with the physiological functions of the iris, but rather upon its blood-vessels.

Gruenhagen, with less respect for "weighty authorities" than is manifested by Stellwag, entirely denies the existence of muscular dilating fibres in the iris. "The dilating muscle has never been found, only inferred, from a supposed physiological necessity. * * The only fibres that can be isolated from the circumference of the iris are branching fibrillæ, destitute of nuclei, or covered with nuclei evidently belonging to epithelium,—while the fibres of the sphincter are easily separable, ribbon-shaped, and nucleated." * "The arcades, described by Koelliker, are only blood-vessels, as may be perfectly demonstrated by preparations of injected specimens." † "The radiating fibres that immediately surround the sphincter, and which even Koelliker could not trace to the circumference, are merely dependencies of the sphincter: those beyond are elastic tissue."‡

In a word, there is only one kind of contraction of the muscular fibre of the iris, that which contracts the pupil, in obedience to a stimulus derived from the retina or brain, and conveyed by the cerebral nerve, or motor oculi.§ Dilatation of the pupil is never active, but, according to its degree, depends on one of three different causes. 1st, simple relaxation of muscular tonicity, or from absence of stimulus. 2d, contraction of the blood-vessels, from irritation of the sympathetic. 3d, paralysis of the motor oculi; with complete abolition of muscular tonus, and substitution of the retractility of the elastic fibres. From these considerations we may more clearly understand the mechanism of the action of atropine on the pupil.

Harley performed the following experiments to ascertain if atropine affected the sympathetic:— ‖

In the first case the sympathetic was cut, and after the pupil had contracted, atropine was instilled into the eye. Thereupon the pupil dilated, but only partially, not so much as when the sympathetic remained intact. In the second case the dilatation of the pupil was first effected by atropine, and then the nerve was cut.

The dilatation remained unchanged.

This shows that the influence of atropine upon the sympathetic in the phenomenon, though real, is subordinate.

Again, Kuyper[¶] found that when the pupil had been moderately dilated by atropine, excitation of the superior sympathetic ganglion increased the dilatation.

This implies that the atropine acts upon another element in the iris than the sympathetic. The three experiments together show clearly indeed that the atropine acts by paralyzing the motor oculi nerve. For the iris, while under its influence, cannot contract, even though submitted to the reflex irritation caused by section of the sympathetic. The contracting force is annihilated, and this force lies exclusively in the motor oculi. On the other hand, when the sympathetic has been previously divided, the dilatation caused by atropine is less, for two reasons: 1st. The motor oculi nerve is in a state of reflex irritation, and consequently more resistant to paralyzing influences. 2d. The vessels of the iris are dilated, and its tissue turgescent.

Finally, in Kuyper's experiment, the fact that irritation of the sympathetic increased the dilatation already determined by atropine, shows that the operation and the poison have acted upon two different elements, so that their effects can be superposed.

It is only at the beginning of atropinism, however, that the mydriasis is moderate, and hence resembles that which occurs after paralysis or section of the motor oculi. As is well known, the dilatation continually increases until, in extreme cases, the iris is reduced to a mere rim. This excessive dilatation cannot be ascribed to the constriction of the blood-vessels under the influence of atropine, for although that must necessarily take place, in the iris as elsewhere, it is only partial,—is an initial phenomenon, and its effects would be confounded with those of commencing paralysis of the motor oculi. It can only be due to such complete abolition of muscular tonus as must result from the paralysis of the muscular nerve of the iris, the motor oculi. The retractility of the elastic fibres then comes into play, and reduces the size of the iris to its minimum.*

The action of atropine in relation to the two nervous systems present in the iris, cerebral, and sympathetic or spinal, is thus quite analogous to its action in the heart. It completely paralyzes the cerebral nerve, and moderately stimulates the sympathetic.

Another analogy is revealed by the researches of Kenchel on the submaxillary gland. It is known that irritation of the chorda tympani, which, as branch of the facial, represents the cerebral influence in the gland, increases its secretion; whereas, irritation of the sympathetic, by determining a contraction of the blood-vessels, diminishes the secretion. † After injection of atropine, irritation of the chorda tympani was without effect, and a canula inserted into the duct remained dry and empty. The condition was the same as if the chorda tympani had been paralyzed, or the sympathetic irritated, and there is reason to believe that both effects had been produced.

In the iris, heart and submaxillary gland, therefore, the action of atropine is uniform,—it paralyzes the peripheric extremity of the cerebral nerves, and, by stimulating the sympathetic, determines contraction of blood-vessels and acceleration of the local circulation; hence a double and analogous mechanism by which it dilates the iris, accelerates the heart's action, and diminishes the secretion in the submaxillary gland. ‡

* Zeitschrift fur Rationelle Medicin. 1866. Bd. 28, p. 180.

† Ibid., p 184. Through the kindness of Dr. Knapp, I have been able to myself observe these vessels of the iris, with walls whose diameter is at least half that of their cavity.

‡ Archiv. von Pflüger. 1870, p. 287.

§ The extremest contraction, as after opium poisoning, is connected with passive turgescence of the blood-vessels of the iris from paralysis.

‖ *Edin. Med. and Surg. Journal*, 1857.

¶ Quoted by Béclard, *Traité de Physiol.*, 1866.

* A familiar example of the effect of the retractility of elastic fibre upon inert muscular fibre may be strikingly seen in the retraction of the uterus of primiparæ after an artificial labor, with complete absence of uterine contractions, yet followed by no hemorrhage; but, on the contrary, the formation of the "*globe rassurant*."

† And which is succeeded, during the rigor mortis, by a moderate contraction of the pupil.

‡ Kenchel's experiments on the splanchnic nerves above quoted, would seem to show an exception to the general action of atropine on the sympathetic. I do not know whether they have been confirmed; I have not yet had an opportunity of verifying them myself.

Original Communications.

A CASE OF SPONTANEOUS UMBILICAL HEMORRHAGE IN THE NEWLY-BORN.

By S. HENRY DESSAU, M.D.,

ONE OF THE ATTENDING PHYSICIANS FOR THE DISEASES OF CHILDREN TO THE N. Y. DISPENSARY, MEMBER OF THE N. Y. COUNTY MEDICAL SOCIETY, ETC.

According to the recent authority of Dr. Ludwig

Grandidier, of Cassel, spontaneous umbilical hemorrhage of the newly-born is an accident of such rare occurrence as to warrant a physician in recording such cases as occur in his practice, for the benefit of scientific investigators into this, as yet, undetermined subject. The great rarity of the accident may be inferred from the fact that, according to Dr. Grandidier, only two cases were seen by Drs. Hooker and Pearing in America, out of 6,889 births, and only one case was seen by Roger, in the Foundling Hospital at Paris, out of 10,000 newly-born children. I therefore add a case more to the number already recorded, which, under the diligent and searching labor of Dr. Grandidier, have amounted to 220 cases, compiled from various American, French, English and German authorities.

James L—— was born at about two o'clock in the morning, October 3d, 1872, after an easy and natural labor of six hours' duration. The mother was a bright mulatto, at the date of confinement in good health, and had previously borne one child, which was living, and, with the exception of being bow-legged, was healthy. The father was a dark-colored negro, of intemperate habits, having a congenital deformity of the left hand, but otherwise healthy. The child, after birth, appeared perfectly healthy, was well-nourished, and weighed seven pounds. Nothing unusual was noticed during the ten days that I attended the mother after delivery, the cord falling off on the fifth or sixth day, and leaving a perfectly healed navel.

On the afternoon of the fifteenth day I was called to see the child, and was told that it had been steadily bleeding from the umbilicus since the early part of the afternoon of the day before, a period of about twenty-six hours. The cause of the hemorrhage assigned by an intelligent white lady, living in the house, was a severe fit of crying, said to have been due to hunger on the part of the child, and inattention on the part of the mother. I found the flannel binder around the body of the child saturated with blood, and other portions of its clothing containing large blood-stains, altogether showing that the child had lost a fatal quantity of the vitalizing fluid. The child was almost exsanguinated, and uttered a very feeble cry. On examination of the source of the hemorrhage I found it located in the centre of the umbilical protuberance, from which dark, venous-colored blood freely oozed. The blood did not coagulate.

As the hemorrhage was still very free, and serious results were to be apprehended from its further continuance, I passed two steel pins through the base of the umbilical protuberance, at right angles to each other, and applied a ligature, wound several times around, beneath the pins. This checked the bleeding most successfully, notwithstanding which the child died ten hours after, apparently from exhaustion.

Grandidier has collected four cases of spontaneous umbilical hemorrhage occurring on the fourteenth day, and twelve cases occurring at later periods, up to the fifty-sixth day after birth.* The recoveries in this accident of infancy were seventeen per cent. in 220 cases.†

As regards the cause of the hemorrhage in the case that I have given, the washing away of the clot in the umbilical vein, by the straining exertions of the child during the fit of crying, is, to my mind, the only solution of the question. A case occurring from the same cause is recorded amongst Grandidier's cases.

The method which I used for checking the hemorrhage, commonly called the Dubois method, is recommended by Grandidier only as a *dernier ressort*. He prefers using a graduated compress applied to the umbilicus over a pledget of lint saturated in the liq. ferri sesquichlor., and bound tightly around the abdomen.

BILIARY FISTULA,

OPENING AT THE UMBILICUS, AND THROUGH WHICH PASSED ELEVEN BILIARY CALCULI.—RECOVERY.

By CHARLES E. SLOCUM, M.D.,

DEFIANCE, OHIO.

Mrs. M., æt. 33, had always enjoyed good health save some transitory fevers of malarious origin.

Had been suffering occasional severe pains in the hepatic and gastric regions for a month or two, when there commenced a pouting and soreness in the umbilical region, followed, April 25th, 1871, by an opening at the umbilicus, through which was discharged a watery, bilious fluid, sometimes staining the cloths a little yellow and green. There was but little pus.

From three to four inches upwards and outwards, to the right from the umbilicus, there was felt a hard mass which was diagnosticated as the enlarged gall-bladder, and with which the fistula was supposed to communicate, but whether by way of the *round ligament* of the liver, made pervious, or of an independent ulceration tract, could not be determined.

She was at this time three months advanced in her third pregnancy. The pains and flow continued with some regularity until August 25th, when they increased in frequency and severity, and two gall-stones were passed from the umbilical opening.

Calculi continued to pass at intervals of one or two weeks, so that at the time of her confinement, October 27th, seven had been collected. She complained much that the fluid discharges from the fistulous tract were "as cold as ice."

She had taken but little medicine, and that of a character to relieve pain and keep the secretions in order, with a little quinine to allay occasional tendency to fever. Had been around the house and feeling quite well between her pains.

She did well during her labor, but was much annoyed for two or three weeks after with pains, and finally fever, periodical in character, which was soon relieved again by quinine. From the time of her confinement to December 20th, four calculi were passed, the eleventh and last one passing at this date.

There was no jaundice at any time. The fistula closed soon after the passage of the eleventh calculus, since which time she has been quite free from pain and tenderness in and about the regions affected.

Her general health has since been quite good, and an examination of the hepatic and umbilical regions at the time of this writing, April 24th, 1873, shows no indications of her former trouble.

The calculi ranged from five-eighths to one and one-eighth inch in circumference, were brownish yellow in color, and generally contained six facets.

Disinfectant.—Dr. Muscroft, of Cincinnati, Ohio (*The Clinic*, Feb. 15, 1873), recommends a disinfecting lotion composed of 1½ ounce of the bicarbonate of soda and 1 ounce of powdered alum, dissolved in water. He uses this mixture for every kind of sloughing sores.

* Die Freiwilligen Nabelblutungen der Neugeborenen, Cassel, 1871.
† Grandidier, loc. cit.

Reports of Hospitals.

CHARITY HOSPITAL, N. Y.

NOTES OF PRACTICE AND PECULIARITIES IN TREATMENT.

BURNS.

A lotion recommended for burns consists of—

℞ Sulphate zinc.....grs. xv.
Co. spts. lavender.....℥ i.
Aqua.....one pint.
M.

Buck's burn mixture is also employed, the formula for which has been previously given.

ERYSIPELAS.

The only successful method of treatment which has been employed for arresting the spread of the disease is the formation of a boundary-line by means of a blister. For this purpose, the vesicatingcollodion is ordinarily used. If erysipelas attacks a limb, encircle it with a blister about one-half or three-quarters of an inch wide, at a free point above the part affected.

A very common, and most excellent, application for the erysipelas, is an ointment composed of—

℞. Sulphate of Iron.....℥ i.
Sapo or unguentum ceræ.....℥ i.
M.

In this way the iron can be used, and the stains avoided, which are so annoying when employed in solution.

SIMPLE CERATE.

A modification of this dressing is used which renders it much more agreeable, and much easier of manipulation in cold weather.

It consists in the addition of oil of almonds, in the proportion of ℥ i. to ℥ i. This makes one of those little variations in surgical dressings which may add to the comfort of the patient and the convenience of the surgeon.

PERSISTENT VOMITING.

There was a case of persistent vomiting in connection with Bright's Disease. The patient was a female and this was the second attack, she had suffered. A number of months previous in her first attack, the vomiting was sufficiently persistent to reject all remedial agents employed for its relief, and it was supposed that the patient must then and there die.

She was placed, however, upon treatment by the use of raw beef, or so nearly raw that it could hardly be said to be an infringement upon the proper use of te ms to call it raw, and she began immediately to improve. Her recovery was complete so far as the vomiting was concerned. Her second attack had come on only a few days previous to my visit, and she was placed upon the beef treatment at once. The results were equally satisfactory with the first, and the patient was now able to take iced milk with her beef, and was feeling very comfortable.

The beef, raw and seasoned with a little salt and pepper, or cooked in the slightest degree over coals and seasoned in the same way, is taken in quantities averaging about one ounce every three hours. It was cut in small pieces, set by the bedside, and the patient administered it "piecemeal."

SPRAINS.

This class of injuries is placed at once in a Plaster-of-paris splint.

Absolute rest and external support are the essentials in treatment.

SUBACUTE PLEURISY.

Tonics are regarded as an essential element in the treatment of this affection (quinine and iron chiefly), and their administration is made the leading feature.

The utility of tapping is looked upon as questionable; at all events, it is not to be resorted to early.

Diuretics are administered only for the purpose of maintaining the quantity of urine at its normal standard. When a diuretic is required, infusion digitalis is the one commonly employed. Some of the potassa salts arecombined with it if not sufficiently active when administered alone.

ULCERS.

A dressing which is said to serve a most admirable purpose for any ulcerated surface which may need a soothing and slightly stimulating application, is the ceratum resinæ et bals. Peruvian. It is usually employed in the proportion of one part of balsam to four of ceratum.

HOW TO REMOVE ADHESIVE PLASTER.

Every surgeon, doubtless, is familiar with the appearance of a part which has been enveloped in adhesive plaster, after the straps have been removed. The appearance is not one in very good keeping with a cleanly and neat surgical dressing. The portion of the plaster which is left adhering to the skin may be quickly and completely removed by the use of oil of turpentine and sweet oil. Use a little more than half turpentine. This compound, carefully rubbed over the parts with a bit of cloth or sponge, and then washed off with warm soap-suds, will leave the surface as clean as nature ever intended.

NECROSIS.

A man had his thigh amputated, on account of necrosis of long standing, near to the knee joint and involving the joint somewhat. He had had some hemorrhages from the opening, and amputation was performed as the most reliable means for saving the man's life. When the amputated portion was examined, there was found a thin sharp spicula of bone just ready to pierce the popliteal artery, which, doubtless, had given rise to the previous hemorrhages. The practical considerations in connection with this case are these:—

Trifling hemorrhages from the granulations which line the cavity of the involucrum are not infrequent, but hemorrhages in old cases of necrosis are quite apt to be dependent upon a more serious cause. They may be produced by the contact of a piece of bone with a large vessel, perhaps, and usually it is with a vessel of some size.

The vessels with which the pieces of bones come in contact and produce hemorrhages are arteries, for the reason that external irritation upon veins fills their cavities with thrombi. This filling of the vessels with thrombi may occur to a slight extent in small arteries, but with large arteries it is not the case. If a severe hemorrhage has occurred from an old necrosis, it is very sure that an artery has been opened by a spicula of bone coming in contact with it, and the only sound practice is to go immediately down upon the artery, and tie it above and below the wound, or amputate the limb at once.

Hesitation in these cases may sacrifice the life of the patient. The examination of the limb in this case shows the reasonableness of this view.

CHANCROIDS.

A goodly number heal rapidly, when dressed with pure iodoform. Occasionally a rebellious one needs to be once thoroughly cauterized, and after this will heal kindly by the use of the iodoform.

SYPHILIS.

Mercury, usually in the form of pechloride or bi-chloride, is employed in the secondary stage, but in the tertiary forms, iodide of potassium is relied upon exclusively. It is given in large doses. The patient receives 15 grs. three times a day for two or three days, and then 20 grs. three times a day, and so on, increasing the doses until he is taking 30 grs. three times a day, which is called the normal quantity. Upon this iodide of potassium diet, the patients are steadily kept, unless they get too fat, when it may be necessary to discontinue it for a while.

STRANGULATED HERNIA.

A man, over 70 year of age, was brought to the hospital having a strangulated hernia, which had been *tampered* with for some time previous to his admission. The man was feeble and there were evidences of peritonitis present. The aspirator was used in this case and about one ounce of serum drawn off, but the relief afforded was not sufficient to permit the reduction of the gut. The ordinary operation was then performed. Post-mortem revealed extensive peritonitis. Delays in the reduction of strangulated hernia are dangerous.

When will tampering surgeons learn to avoid these delays?

Progress of Medical Science.

HYDRATE OF CHLORAL IN INCONTINENCE OF URINE.—Dr. Girolamo Leonardi has found chloral a most valuable remedy in nocturnal incontinence of urine. The dose for children is from five to ten grains taken in water before going to bed. For adults the dose is proportionately larger. The treatment has been successful in all of his recorded cases. The remedy must be repeated for several successive nights.—*Lo Sperimentale*, April, 1873.

ACTION OF COLD WATER ON THE SPLEEN.—The importance which many authors, and Fleury especially, have ascribed to cold water as a remedial agent in intermittent fever and various other affections of the spleen has induced Prof. Mosler, of Greifswalde, to test its efficacy, and he has arrived at the following conclusions:—

1. The direct contact of cold water with the normal spleen causes it to contract appreciably, and the degree of contraction varies according to the temperature of the water and the length of time for which it is employed.

2. Cold water also acts similarly on the normal spleen, if applied over the abdominal walls, but it is less effectual. In such cases the cold douche is to be preferred to cold compresses or bits of ice, but in all of them it accomplishes less than quinine.

3. In all forms of enlarged spleens, the result of disease, whether acute or chronic, the action of cold water causes contraction of the organ.

4. The paroxysms of intermittent fever can be arrested by Fleury's method of using the cold douche, but it has no advantage over quinine, either in new or old cases.

5. The cold douche does not accomplish a permanent cure of this fever. It does not always prevent recurrence, and leaves the spleen enlarged.

6. The spleen of typhoid fever is diminished in size by the same remedy.

7. In all forms of enlargement of the spleen, whether acute or chronic, the application of cold water to the spleen, either in the form of cold baths, ice-bags, or cold douches, with the internal use of quinine at the same time, is to be preferred to either of these methods alone.

8. As a substitute for quinine in chronic cases, quinoidine is recommended as being very much cheaper.—*Archiv. f. path. anat.*, lvii., 1.

TINCTURE OF IODINE IN ELEPHANTIASIS ARABUM.—At the last session of the Academy of Medicine in Paris, for the year 1872, Olivade reported several cases of elephantiasis Arabum which he had treated successfully with large doses of the tincture of iodine. He employed it internally and externally. Commencing at first with a few drops, he gradually increased the dose to a drachm, and the success was proportioned to the amount given. The tincture was applied externally on long strips of linen. In every case, marked improvement showed itself by a diminution in the size of the affected part, and by the altered character of the skin. After the lapse of three months, during which moderate compression was kept up, the disease had nearly entirely disappeared.—*Mem.*, 3.1873.

INVESTIGATIONS ON EPITHELIAL CANCER.——Dr. William A. Carmalt, of this city, in a recent article published in Virchow's Archives makes some valuable contributions to the history of epithelial cancer. He mentions that among fifty or sixty such growths occurring on the cheeks and lips in patients coming under his own observation, only two were in women and none were in full-bearded men, corroborating the statement of Fuehrer that it is most common in persons who shave. In opposition to Koester's theory that the cancer-cell may be developed from the endothelium of the lymphatic vessels, he found by employing the silver method that no proliferation in these cells was apparent, and, in fact, that when carefully separated from the cancer-cells filling these vessels, the endothelium had undergone no change whatever. On the other hand, he believed that he traced direct connection between cancer-cells and the altered epithelium of the hair-follicles.

Experiments as to the capacity of independent motion in the living cells of new growths resulted as follows: by removing fresh cells from the living body and immediately mounting them in the serum which escaped, and maintaining their normal temperature on a heated table, he observed amœboid motion in individual instances. The changes these bodies underwent in form were similar to those observed in the white blood-corpuscles mingled with them. The activity of the latter, however, was more marked. The investigations were carried out at Prof. Waldeyer's laboratory in Breslau.—*Archiv. f. path. anat.*, lv.

TRAUMATIC FLEXIONS OF THE UTERUS.—Alex. J. Stone, M.D., St. Paul, Minn. (*Northwest Medical and Surgical Journal*), for the past two years has had his attention called occasionally to flexions dependent upon a traumatic cause, and publishes a case. He believes that, while to the submucous stratum the uterus owes

much of its firmness, the muscular parenchyma aids in giving this support to a considerable extent.

Small-pox Keratitis.—Dr. A. D. Williams, St. Louis, Mo. (*Med. Archives*), combines atropine with carbolic acid in the treatment of small-pox keratitis—the carbolic acid aiding greatly the effect of the atropine. The proportions are as follows: R. atropine sulph., gr. iv.; acid. carbolic, gr. v.; aquæ destilat., ℥ j. Mix. To be dropped in the eyes three to five times a day, according to severity of the keratitis; two or three times at night, if there is much pain. In addition to this treatment, in cases of deep ulceration of the cornea, where the healing process is slow, a very strong solution of the acid (15 to 30 grs. to the ounce) may be applied directly to the ulcer once a day. First cleanse the ulcer well, and dip the end of a small probe into the solution and touch the small drop that sticks to it directly to the bottom of the ulcer. This will spread over the ulcerated surface and turn it instantly white. It smarts sharply for a moment. Care should always be taken to confine this strong solution to the abraded surface of the cornea.

Boracic Acid as a Preservative for Milk.—According to A. Hirschberg (*New Remedies*), the addition of 15 grains of boracic acid to two pounds (equalling a quart) of milk will keep it sweet in hot weather for five days. The usefulness of the milk is said not to be impaired, but the cream rises more slowly than normal.

Experiments with the Cundurango.—Dr. Edmund Andrews, of Chicago (*Med. Examiner*, 1873), and others, have been experimenting with fluid extract of cundurango on 23 cases of common ulcers, cancer, soft chancres and the eruptions and ulcerations of tertiary syphilis, and come to the following conclusions: Cundurango has no equal in the materia medica in its power to increase the growth of granulations, and hasten the cicatrization of ulcers. It acts favorably in soft chancre (after cautery), and on the ulcers and eruptions of tertiary syphilis. His experiments on hard chancre are not yet extensive enough to be decisive, but, as far as they go, they tend to the idea that cundurango has no influence on hard chancre, nor on the earlier eruptions of secondary syphilis. The remedy has not produced, under his observation, any effect on the growth and progress of cancerous tumors. It however often diminishes the pain and the discharges, and if the tumor has been excised, hastens the healing of the wound. It generally increases the appetite, diminishes constipation, and acts on many patients as a very powerful general tonic. Full particulars of the cases, which were under the care of Dr. Byford, Powell and himself, are given in the appended tables.

Exophthalmic Goitre.—J. Forsyth Meigs, M.D., Phys. to Penn. Hosp'l (*Phila. Med. Times*), in his clinical lecture "On a Case of Exophthalmic Goitre," says that, in his later cases, he has used digitalis with benefit. Digitaline granules, gr. 1–60, three times a day, sometimes answer perfectly.

The External Application of Veratrum-Viride.—Dr. Anson Ford, of Battle City, Montana (*Jour. Gynæcological Soc.*), writes, that in the absence of all the remedies usually exhibited, he applied to *a supposed cancer of the left breast* Norwood's tincture of veratrum viride, and was astonished at its immediate and almost magical effect. The induration of the gland and the excruciating pain disappeared under this treatment. A cloth was kept over the gland, saturated with the solution, and over all oil silk, to prevent evaporation. Was it cancer?

The Pulvis Glycyrrhizæ Compositus.—David Page, M.B., Edin. (*Can. Med. Record*), recommends the compound liquorice powder, a preparation of the Prussian Pharmacopœia, especially in simple constipation resulting from atony of the bowel. It is composed of the following constituents, so prepared as to form when incorporated an almost impalpable powder: Senna leaves, ℥ vj.; liquorice root, ℥ vj.; fennel seeds, ℥ iij.; sulphur, ℥ iij.; refined sugar, ℥ xvij. The usual dose is a small teaspoonful at bedtime, in water, forming an agreeable draught.

Carbolic Acid of no Value in Intermittent Fever.—In order to test the assertions of Freulich, that the internal use of carbolic acid is a good substitute in cases of intermittent fever, V. Havard, M.D., A. A. Surg. U. S. A., Camp Grant, A. T. (*Western Lancet*), has tested its value in 19 cases. He comes to the conclusion that this acid possesses but little, if any, of the antiperiodic properties attributed to it. It was given mostly in quotidian cases, as this variety is the common one in Arizona, and in doses from two to three grains, three times a day.

Acute Diseases of the Heart.—W. F. McNutt, M.D., San Francisco, Cal. (*Western Lancet*), mentions two cases of acute disease of the heart, accompanied and masked by functional derangement of the brain, which came under his care. These resembled the sixteen reported by George Burrows, M.D., of London, and the three cases published by Prof. A. Flint. The character of the delirium in most of the recorded cases, was characterized by taciturnity and maniacal excitement, "under the influence of delusions, involving the idea of having committed some crime." In his cases, one patient would insist upon it that he had been stealing from his employer and should be sent to jail; the other, that he had committed a great mistake in business. He says that it must not be forgotten that grave cerebral symptoms are essential elements of disease of the heart.

Nephrotomy.—W. W. Dawson, M.D., of Cincinnati, Ohio (*N. Y. Med. Jour.*), reports a case of extraction of a calculus from the kidney of a married woman, aged 50 years, who had borne nine children, and had always been a healthy and robust woman until eight years ago, when she had an attack of hæmaturia. The patient died on the fifth day. The calculus was quite light, weighing only 20¾ grains, and measuring seven-eighths of an inch in length by half an inch in breadth at its widest part, being uniform in shape. It was ammoniac magnesian phosphate, and situated on the internal wall at a point corresponding to the hilus of the kidney, and was embedded in partly disorganized fibrin. The kidney-tissue which he incised was about one-half inch in thickness, and bled but little.

Febris Diphtheroides.—G. Harrison Gray, A. A. Surg. U. S. Navy, attached to the U. S. Naval Hospital, Yokohama, Japan (*Am. Jour. Med. Sciences*), proposes the name febris diphtheroides for a disease which has attracted his attention, and which differs sufficiently from any other. So far as he is aware it has never been described, and is peculiar to Chinese rivers. He first observed it up the Yang-Tse-Kiang River, afterwards at Shanghai, still later at Ningpo, both these places being on fresh-water rivers, and finally the last traces of it disappeared when the ship again commenced cruising in salt water. Though

diphtheria is by no means an unknown or uncommon disease in the northern part of China, especially about Pekin, and though intermittent fever abounds in all parts of the country, this disease which he has called diphtheroid fever, and which presents some of the features of both those mentioned, seems peculiar to fresh-water rivers, and was unknown to physicians who had resided for a long time where he saw it. From this he fancies some of the elements necessary to the production of the disease were carried there in the ship, for while in Corea many of the crew had suffered with a sort of sub-acute pharyngitis, and the trip up the Yang-Tse-Kiang followed immediately after the return from Corea.

The Early Symptoms and Treatment of Insanity.—In a paper read before the Bristol North District Medical Society, Dr. W. W. Godding, Phys. to Lunatic Asylum, Taunton, Mass. (*Bost. Med. & Surg. Jour.*), gives the following symptoms and management of insanity: In nine cases out of ten there will be marks of disorder about the clothing or person in some way, for, as a rule, the insane show untidiness of dress; the insane are often uneasy, in a constant motion, getting up, walking about the room, busy with nothing. Later in the disease, they will sit for hours in the same position; sometimes this is so from the commencement, not usually. Depression, as shown in the whole manner as well as in the countenance, is seen in the early stage of insanity, in a majority of cases. Dr. Saukey goes so far as to claim that no attack of insanity occurs primarily without an incubating stage of depression. He doubts the truth of this, but it is a very common condition. Hallucinations of hearing are not very uncommon in insanity and must be regarded as an unfavorable symptom. Hallucinations of sight are, in his experience, much rarer in insanity than in delirium. Want of sleep occurs in a great majority of the cases of insanity, and it is surprising how long they will sometimes survive apparently without sleep, and yet in the end recover. The return of sleep is often the commencement of convalescence. The digestion is impaired in the early stages. Sometimes the moral sentiment alone seems to be at fault. A not very uncommon form of this is seen in young persons recovering from typhoid fever. Paresis seems the very inflorescence of insanity. In regard to the early treatment, in the active forms of insanity, the two important points are to keep up the strength and to secure sleep. The first is best done by nourishment, and in many cases he thinks an early resort to the feeding tube is the humane and the only justifiable course to pursue. There is no doubt but it might be used to advantage much oftener than it is, outside of hospitals. No year passes that he does not see lives saved by its use. A full meal is often a better sleep-compeller than an opiate. Milk, egg and brandy, with a little nutmeg and sugar, is very palatable and anodyne in its action. As a hypnotic, chloral hydrate is the favorite reliance, in doses of 20–30 grains at bedtime; it will bear to be repeated, but not indefinitely. But in mania all drugs are uncertain in their effect. He holds that insane persons are not to be taken indiscriminately to a hospital simply because they are insane.

Ampho-Diplopia Cured by Operation.—Dr. D. S. Reynolds, Louisville, Ky. (*Am. Practitioner*, March, 1873), records a case of this affection, in which he lays claim to an entirely original method of manufacturing an inferior oblique muscle out of the internal rectus, as well as an efficient method of relieving double vision resulting from persistent spasm of the superior oblique.

Crystallized Digitaline.—The directions given by M. Brugnet for preparing pure crystallized digitaline are as follows: The drug is exhausted with fifty per cent. alcohol, the alcohol recovered by distillation, and the residue concentrated to a weight equal to that of the digitalis originally used. This concentrated extract holds in solution the digitaline, but, on dilution with three times its weight of water, it deposits nearly the whole of this principle in an impure state, but free from the digitaline and other soluble principles, which interfere with the crystallization of the digitaline. The deposit is dried and extracted with twice its weight of boiling proof-spirit, which dissolves the digitaline. As the solution cools it deposits crystals, which continue to form till the liquor is exhausted. The digitaline is separated from the digitine by extraction with chloroform, and, after treatment with animal charcoal, is recrystallized from boiling alcohol.

Crystals thus procured are fine, white, shining needles arranged in stellate clusters. They are intensely bitter, give a wonderfully intense emerald-green coloration with hydrochloric acid, and produce the peculiar physiological effects of digitalis in extremely minute doses—$\frac{1}{250}$ of a grain.—*Med. Press and Circular.*

Epistaxis a Means of Vicarious Menstruation.—A case of this character is mentioned by Dr. Otto Obermeier (*Brit. and For. Med. Chir. Review*, July, 1872), in a servant-girl, aged 24. At the age of 15, the first catamenia appeared, which was profuse. Epistaxis came on the following month, and appeared regularly for several years, until pregnancy in 1870, when it terminated, but again came on six weeks after parturition, and continued regularly for some months, when conception took place. Three days was the usual run of the epistaxis, which was attended by muscæ volitantes, malaise, feeling of giddiness, etc.

Large Child.—At a recent meeting of the Obstetrical Society of Boston, Dr. Minot said he had lately attended a lady whose child, when dressed, weighed but a trifle less than fifteen pounds!

ARTICLES IN OUR EXCHANGES.

SURGERY.

A case of fracture of the internal table of the os frontis alone, the external table remaining unbroken; death; post-mortem. Triplett, W. H. *Boston Med. and Surgical Jour.*, April 17.

Contributions to the history of the surgery of Tennessee. Bailey, F. K. *Nash. Jour. Med. and Surgery.*

Report on Tennessee surgery. Briggs, W. T. *Ibid.*

Two cases of vesico-vaginal fistula, with operations for the relief of the same. Miller, J. G. *Kansas City Med. Jour.*, April.

The operation for hare-lip, with two cases and photograph. Brigham, Chas. B. *Western Lancet*, March.

Reduction of a dislocation five months after injury. Toland. *Ibid.*

On the surgery of the nares, larynx, and trachea. Cohen, J. Solis. *Phila. Med. Times*, April 19, 26, and May 3.

Elongation of the uvula. Lewis, F. B. A. *Boston Med. and Surgical Jour.*, April 17.

Tracheotomy in a case of membranous croup; recovery. Emerson, Nathaniel B. *N. Y. Med. Jour.*, May.

Rupture of œsophagus. Bailey, Jas. S. *Ibid.*

Cases of lithotomy. Cabot. *Boston Med. and Surg. Jour.*, May 1st.

A case of necrosis of the cranial bones in connection

with disease of the mastoid cells. ASHHURST, SAMUEL. *Phil. Med. Times*, April 26.

Ligation of the subclavian artery for axillary aneurism. ARMSBY, JAMES H. *Phil. Med. Times*, May 3.

A mechanical appliance to restore the features after the excision of an osseous tumor of the superior maxilla. KEITH, H. H. *Missouri Dental Jour.*, April.

Phagedenic ulceration of the rectum. WHITEHEAD, WM. R. *Southern Med. Record*, April.

How to secure union by first intention. GARRISON, J. B. *Med. and Surg. Reporter*, May 3.

Facial paralysis treated by a new method. DETMOLD, WM. *N. Y. Med. Jour.*, May.

Contusion of the hip. RICHMOND, CHAS. H. *Ibid.*

Abscess of the mastoid cells; spontaneous evacuation, followed by caries. DESSAU, S. HENRY. *Ibid.*

PRACTICAL MEDICINE AND PATHOLOGY.

Gonorrhœa and stricture treated with urethral suppositories. WOODBURY, HENRY E. *Phila. Med. Times*, May 3d.

Pyæmia as a cause of fatality in ovariotomy. BECK, JOSEPH R. *St. Louis Med. & Surg. Jour.*, May.

Yellow fever. COOK, T. A. *Southern Med. Record*, April.

The prevalent fever of Cherokee, Georgia. BATTEY, ROBERT. *Ibid.*

Galen and Paracelsus. DALTON, J. C. *N. Y. Med. Jour.*, May.

Some recent works on intestinal occlusion. JOHNSON, W. O. *Boston Med. and Surgical Jour.*, April 21.

Experiences in variola. SENSENERY, B. RUSH. *Med. and Surg. Reporter*, April 19.

Croup. SCARFF, W. D. *Cin. Lancet and Observer*, April.

Facts and reminiscences of the medical history of Kentucky. ROGERS, LEWIS. *Am. Practitioner*, April.

A case of hepatic abscess. PREVOST, J. R. *Pacific Med. and Surg. Jour.*, April.

Dengue, or break-bone fever. WHITEHEAD, W. E. *Ibid.*

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Clinical contribution to diseases of women. PARVIN, THEOPHILUS. *Am. Practitioner*, April.

Practical points in the medical care and nursing of children. WALKER, JEROME. *Sanitarian*, May.

History of a case of uterine fibroid. PALMER, C. D. *The Clinic*, April 19.

Curious monstrosity. REYNOLDS, T. O. *Ibid.*

Vesico-vaginal fistulæ; a rare case. THOMPSON, MARY H. *Med. Examiner*, April 15.

Report on obstetrics and diseases of women. BIRNEY, S. H. *Ibid.*

Two cases of retained fœtus some months after their death. ALLEN, E. P. *Phila. Med. Times*, April 19.

Bleeding in certain cases of puerperal eclampsia. CLEEMAN, RICHARD A. *Ibid.*

Trismus nascentium. A case successfully treated with chloral. MAXWELL, G. TROUP. *Medical Times*, May 3d.

The teeth and pregnancy. KOCH, CHAS. R. E. *Missouri Dental Jour.*, April.

Cancer of the vagina. The uterus atrophied, but otherwise normal. WHITEHEAD, WM. R. *Southern Med. Rec.*, April.

Successful case of ovariotomy, with remarks. WHITEHEAD, WM. R. *N. Y. Med. Jour.*, May.

A case of abscess of right broad ligament and surrounding cellular tissue. JANVRIN, J. E. *Ibid.*

Case of pudendal lipoma; operation. THOMAS, T. G., and HUNTER, JAS. B. *Ibid.*

OPHTHALMOLOGY AND OTOLOGY.

Ecchymosis of the eye-ball as a sign of fracture of the base of the skull. HODGES, R. M. *Boston Med. and Surg. Jour.*, April 17.

Concerning cauterization of the cul-de-sac with lapis purus in corneal affections. SMITH, WM. F. *Western Lancet*, March.

Strabismus convergens. RISLEY, S. D. *Phila. Med. Times*, April 19.

Report on ophthalmology. WADSWORTH, O. F. *Boston Med. & Surg. Jour.*, May 1st.

NEW INSTRUMENTS.

A new instrument for treating diseases of the neck and cavity of the womb. WOODBURY, H. E. *Phila. Med. Times*, April 26.

Meerschaum probe. CULBERTSON, H. *Ibid.*

Modified lithotomy staff. MASON, LEWIS D. *N. Y. Med. Jour.*, May.

THERAPEUTICS AND MATERIA MEDICA.

On the action of digitalis upon the circulation. WOOD, H. C., JR. *Phila. Med. Times*, May 3d.

Our Pharmacopœia. TURNER, WM. L. *The Pharmacist*, April.

Essay on aconites and aconitine. *Ibid.*

Inunction of mercury in syphilis. COGLEY, T. J. *The Clinic*, April 20.

Conium in the treatment of insanity. KITCHEN, DANIEL H. *Am. Jour. Insanity*, April.

Electricity and life. *Ibid.*

Dental pepsin. CHASE, HENRY S. *Missouri Dental Jour.*, April.

Central galvanization. ROCKWELL, A. D. *N. Y. Med. Jour.*, May.

The effects of tension and relaxation of muscle upon electro-muscular contractility. FISHER, WM. R. *Ibid.*

Belladonna *versus* opium. BURRITT, H. L. W. *Med. and Surg. Reporter*, April 19.

Eucalyptus globulus. KIELY, WM. E. *Cin. Lancet and Observer*, April.

Carbolic acid as a dressing in wounds. WILSON, J. T. *Kansas City Med. Jour.*, April.

ANATOMY AND PHYSIOLOGY.

The action of the intercostal muscles. DWIGHT, JR., THOMAS. *Boston Med. & Surg. Jour.*, May 1st.

Report on pathology and pathological anatomy. FITZ, R. H. *Boston Med. and Surg. Jour.*, April 17 and 24.

HYGIENE.

Defective drainage. MORRIS, MOREAU. *The Sanitarian*, May.

Some points relative to the sanitary influence of light. HAMMOND WM. A. *Ibid.*

Free parks and camping grounds, or sanitariums. TONER, J. M. *Ibid.*

DISEASES OF THE NERVOUS SYSTEM.

Premonitions of paralysis. WOODWARD, B. *Kansas City Med. Jour.*, April.

Violence and unconscious state of epileptics in their relations to medical jurisprudence. ECHEVERRIA, M. G. *Am. Jour. Insanity*, April.

Psychological retrospect. *Ibid.*

On tetanus and tetanoid affections, with cases. ROEMER, B. *St. Louis Med. and Surg. Jour.*, May.

Pas-ive capillary congestion of the brain. GRAVES, J. B. *Med. and Surg. Reporter*, May 3.

SYPHILIS AND DERMATOLOGY.

Case of animal poisoning from the use of soap. CROTHERS, T. D. *Med. and Surg. Reporter*, April 19.

Furrowed enamel, in connection with syphilitic and other exanthematous diseases. CUTLER, S. P. *Nash. Jour. Med. and Surgery*, April.

Two nævi cured by Monsel's solution applied externally. GEIGER, JACOB. *Am. Practitioner*, April.

Anderson on skin diseases. *Med. News & Library*, May.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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

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THE AMERICAN MEDICAL ASSOCIATION.

THE recent meeting of the American Medical Association was a remarkable one, insomuch as there was an absence of the disgraceful quarrels which have characterized its proceedings for the past few years. This, so far as it goes, gives a promise for a better future, and shows that the entire session can be carried through without the occurrence of anything that should mar its usefulness or reflect upon its dignity. Although we are willing to admit that this is a source of congratulation to the friends of the Association, and is a circumstance which is in every way encouraging, we are nevertheless convinced that something more than at present exists is needed to warrant the continuance of such meetings. It is true the members present seemed to be actuated by a common purpose to make this meeting a memorable one, and, in so far as their wishes were concerned, they succeeded. But this was not a very difficult task, under the circumstances. Fortunately, none of those test questions which have heretofore called forth such angry discussions in open session came up. There was evident a disposition to avoid them from the beginning, and the sequel proves this course to have been the wise one. The Association could not in reality dare to repeat some of its previous performances before the world. The profession were so painfully impressed with the necessity of some reform, that unless some change were inaugurated at once the Association would lose all its former prestige, and it would forever part with its claims as a representative body. Enough was done at St. Louis, however, to prove that there is still an abiding interest felt in the welfare of the Association to warrant its continuance, and to assure all its friends that it is capable of redeeming its lost reputation. On former occasions we have discussed the propriety of reorganization as the best means of insuring this end; and despite the apparent capability of the Association to manage its own affairs in the old way, we are still convinced that our opinion is the correct one. There is a crying necessity for such an alteration in the constitution and by-laws as shall effectually prevent the discussion in public of all questions which have an interest for the profession alone; as shall settle them in some other and more effectual way than by ending in a family quarrel, which is made the most of by the daily press. Our readers are already sufficiently familiar with our plan of change. We do not claim it to be perfect—we do not wish to place it above all others. Our desire has been and still is to do the best that can be done to bring about the best result. We care not which plan may be adopted so long as this end is attained.

The formation of a large committee, to whom all the important questions in ethics shall be referred, is, in our opinion, the most practical one—one which will not involve so much of alteration in the present plan of organization as many of the others which have been proposed by our contemporaries. It is vain to hope that every meeting can be so managed as to prevent the presentation of these questions. Such is an impossibility, in view of the recognized office of the Association, as a tribunal before which all doubtful points must be judged. The profession, as a body, are interested in their solution, and their proper solution has an important influence upon the standard of American medicine. The only thing to be done is to settle them in a becoming and satisfactory manner. So long as the present organization exists, we are convinced that this never can be done without endangering still more the reputation of the Association for respectability, and without incurring the chances of a repetition of disgraceful performances. We must prevent the annual parade of twaddle from such of the members as never give the subject any other thought than that which is engendered by the mere hearing of a report. There are always to be found, in every assemblage, learned and unlearned, persons who have more impudence than brains, and whose sole ambition seems to be to make a speech upon the slightest pretext. These are the very men who have done so much injury to the Association, and whose opinions have been quoted as representative of the general professional feeling. This parade of nonsense could be checked at once by having all such questions referred to a sufficiently large, influential, and respectable committee with power, and by having any necessary discussion upon the report conducted in private. Dr. N. S. Davis, true to the reputation which he has enjoyed of having the best interests of the Association at heart, and willing to do anything calculated to enlarge its scope of usefulness,

presented in substance the amendment proposed by us. We were sorry to see it laid upon the table, but are not discouraged at this result. Time will be given during the coming year for a thorough discussion of the merits of the proposed change, and in all probability at the next meeting the members may be ready and willing to act upon it. If any improvement be suggested, we shall be glad to see it incorporated.

As an evidence of desire to improve the usefulness of the Association in other directions, we have the adoption of the suggestions of the committee of which Dr. E. L. Howard, of Maryland, is chairman, in reference to reorganization of the sections, the vesting of discretionary power in the Committee of Publication in regard to papers which shall appear in the Transactions, and the provision, at the suggestion of another committee, for complete phonographic reports of the various proceedings of these sections. These changes cannot fail to give an interest in the scientific proceedings of the Association, and stimulate the best men to attend the meetings.

There are many other subjects which were brought up before the Association to which we cannot refer to in detail. One of the most important of these was the matter referring to army promotions, presented by Dr. Woodward. The resolutions adopted concerning the same will receive the hearty indorsement of the entire profession.

Dr. Peck, of Iowa, seconded, in a very appropriate manner, our suggestion in regard to the action which the Association should take concerning the Medical and Surgical History of the Rebellion. The Association, by promptly and unanimously adopting these resolutions, did credit to itself.

The sections were reasonably well attended; but the papers, with few exceptions, did not come up to the standard of last year.

Dr. Pollock's Report on Medical Education was an exceedingly sensible one, and the same may be said of the Report of the Committee on the Nomenclature of Diseases.

But we must content ourselves for the present by simply referring our readers to the report in full in another column.

MEDICAL EXPERTS.

With certain medical gentlemen there seems to be a strong desire to be considered medical experts. Especially is this disposition shown in cases of questionable insanity before our courts. We have always considered that to be an expert required a thorough and practical acquaintance with the subject, but the apparent necessity of the times seems to have rendered this unnecessary. The pleas of moral insanity, emotional insanity, and the like, are now considered to be such forlorn hopes that the lawyers seem to be willing to take the opinion of any one who may volunteer it. The consequence is, we are getting a new instalment of experts not known or recognized as such by the profession, but nevertheless of value as figure-heads. At a recent trial in New York we saw a number of respectable medical practitioners lending their names to the court and stultifying themselves by the expression of opinions for which they had no possible foundation. The study of insanity has been recognized as a specialty for the last quarter of a century; and it is fair to suppose that there are thousands of questions that can be put by an attorney which are unanswerable, save on the basis of a very extensive practical experience in the treatment of the disease. A physician who has not such an experience places himself in a false position by claiming to be qualified to give an opinion. There would be no disgrace for any practitioner to acknowledge incompetency in this respect, if called upon. We hope that in future any such who may be urged for an opinion may have the moral courage to acknowledge ignorance before it is made so evident in a crowded court-room, and through the columns of the daily papers. It is also obviously unfair to the real experts on insanity—the gentlemen who have the best opportunities for studying the disease—gentlemen who are connected with our insane asylums—to have the crude opinions, formed by a hasty glance at some authority, foisted upon the public as representing the advanced views of the present day. It is just such cases as these that give the legal profession the whip-hand of the medical profession, and give rise to the complaint, on our part, that the former never lose an opportunity to make fools of us. We believe that every one has his place; and if some of the medical tortoises trust to the legal eagles to teach them to fly, they must learn, sooner or later, that the higher they are taken into the air the more disastrous will be their fall when left to their own resources.

PRELIMINARY EXAMINATION FOR STUDENTS.

The Medical Society of the State of New York has recently made it obligatory on the part of every County Society to examine all gentlemen intending to study medicine, and give them a certificate of their fitness. How far this provision is carried out we are not able to say. We know of two counties in the State who make it a regular practice, one of which is the Ulster County Medical Society. We were present at the last monthly meeting of this body, and witnessed such an examination, which was remarkably thorough, and conducted by the committee with a determination to fulfil the full letter of the law. If other similar societies are not in the habit of complying with the regulations, we take the opportunity of holding this one up as an example of what can be done in this direction. We should like to hear from other quarters.

HOMŒOPATHY IN THE UNIVERSITY OF MICHIGAN.

The bill establishing two chairs of homœopathy in the University of Michigan has become a law. So

far as the present Faculty is concerned, the question is simply, shall they abandon their posts (which will result in placing the whole school in the hands of the homœopaths, and so ruin one of the best institutions in the country), or shall they maintain their ground and continue to teach truth right in the face of error, and without reference to the punctilious etiquette, miscalled ethics, which would make them turn tail to a mere shadow and desert their proper work and duty? We say to them, as Sumner said to Stanton, "Stick!"

HEALTH DEPARTMENT OF NEW YORK.

THE new Health Commissioners are Chas. F. Chandler, President; Dr. S. Oakley Vanderpoel, Health Officer of the Port; Dr. Stephen Smith, and Henry Smith, President of the Police Board. The President, Prof. Chandler, is to all intents and purposes a medical gentleman, and is in every way qualified for his position, as is also the Health Officer. Dr. Stephen Smith is a reappointment. Mr. Henry Smith is a politician pure and simple, but will no doubt do everything he can to earn a reputation for efficiency. On the whole, then, the Board may be considered a remarkably well-selected one, the majority possessing the ability for their work and the necessary amount of backbone to enforce their regulations without fear and without favor.

MEDICAL DECLARATION CONCERNING ALCOHOL.

MANY of the prominent members of the medical profession of this city have made a declaration to the effect that alcohol is a powerful drug, and when prescribed medicinally should be "with conscientious caution and a sense of grave responsibility." It is also declared that "the use of alcohol as a beverage is productive of a large amount of physical disease,—that it entails diseased appetites upon offspring, and that it is the cause of a large percentage of the crime and pauperism of our cities and country." We heartily indorse the circular and hope that some good may come of it. The only end that in our opinion it can serve is to lead many of those practitioners who prescribe stimulants so recklessly to reflection upon the responsibilities which they assume. We have always held that alcohol should be prescribed with as much caution as opium, and should never be left to the discretion of the patient.

The third clause of the circular "welcoming any judicious and effective legislation—State and National—which should seek to confine the traffic in alcohol to the legitimate purposes of medical and other sciences, art, and mechanism," is visionary in the extreme, but is well enough to give some faint encouragement to such as believe that appetites can be controlled by legal enactment.

SANITARY SUPERVISION OF SCHOOLS.

WE are surprised to learn that the Board of Education has abolished the office of Sanitary Superintendent. We were beginning to congratulate the public on the promise of good things to come in the shape of improvement in the sanitary condition of our schools. Dr. O'Sullivan, who held the office, was just getting the machinery of reform in order, and in the short space of six months did more to initiate important changes than all the visiting committees together had done in five years. The suggestions which he made were of the greatest importance to the health of the children, but were seemingly unheeded. Now we are told that the office is a useless one. If this be so, then the Board of Education must be ready to affirm that the schools are in good sanitary condition. Which is which?

THE ENDOWMENT FUND OF THE COLLEGE OF PHYSICIANS AND SURGEONS, N. Y.

BY the time this number of THE RECORD reaches our New York City subscribers, those among them who are graduates of the College of Physicians and Surgeons will have received the Appeal of the Councillors of the Alumni Association, urging them to contribute money toward the establishment of a Scientific Department in connection with the College. We have watched this movement of the alumni with anxious interest, and are thoroughly satisfied with the sound practical shape it has finally assumed. The profession at large—no matter from what school its individual members may have taken their degrees—will be deeply interested in the success of this undertaking, as it aims, not so much to benefit the College proper, as to open the way for a higher standard of medical education and to foster scientific investigation. The day is not far distant, we believe, when New York will vie with Vienna and Berlin in the inducements it can offer medical students both for the practical and the scientific branches of their professional studies.

We are authorized to state that the Councillors are particularly anxious that *every* alumnus of the college should contribute to this fund. There are probably very many graduates, who will not feel able to contribute more than five dollars as their share. We earnestly hope that these men will not withhold their subscription, in the belief that the sum is too small to be of any real assistance in raising the comparatively large sum of $100,000. Such a mode of reasoning will very materially increase the labors of the Councillors, who have determined that this sum *must* be raised. In our next issue we shall take occasion to discuss at length the general principle of endowment of our medical institutions.

DR. JAMES L. BROWN.—The concert recently given by the Vocal Society for the benefit of the family of Dr. James L. Brown netted over $5,000. It is pleasing to add that the Society gave their services, and that Mr. Steinway tendered the use of his Hall for the occasion.

Reports of Societies.

AMERICAN MEDICAL ASSOCIATION.

TWENTY-FOURTH ANNUAL SESSION AT ST. LOUIS, MO.

May 6, 7, 8, 1873.

DR. THOMAS M. LOGAN, of Sacramento, Cal., President.

THE twenty-fourth annual meeting of the American Medical Association was held at Masonic Hall, St. Louis, commencing May 6, 1873.

The meeting was called to order at 11 A.M. by Dr. D. W. Yandell, of Louisville, after which prayer was offered by Rev. Dr. Nicolls. Dr. John S. Moore, of St. Louis, then delivered the address of welcome, after which the President elect, Dr. Thomas M. Logan, being presented to the Association, delivered an address.

THE PRESIDENT'S ADDRESS.

After referring to the interest felt in the Association all over the country, and particularly by such members who journeyed across the Rocky Mountains to attend the meeting in San Francisco, he alluded to the necessity of exacting of the medical colleges a higher standard of preliminary education, and a more thorough and exacting course of instruction afterwards. In this latter connection he paid Harvard University a deserved compliment for taking a stand in the right direction and of establishing a system of instruction thorough, practical, and in every respect up to the requirements of the present age of progress and reform. He also urged the necessity of cultivating the science of public hygiene, and through it the education of the people upon subjects concerning which they now desire to be informed. This was one of the ways whereby medicine could gain and maintain for itself a legitimate influence upon the community whose welfare they were bound to consider. The only way to command respect for the profession was to educate the people to the point of appreciating its benefits. The more they were informed of its utility and power, the better would they be able to withstand the inroads of quackery and incompetency. The people were ready to be taught, and the profession had but to seize the opportunity, to control opinion as effectually in matters of hygiene as does the pulpit matters connected with morality and religion. To this end the public lecture-room and the press could be used with advantage to all parties concerned. In this connection he remarked:—

"When I recommend, as one of the means of widening the usefulness of the Association, the judicious instruction of the community in the knowledge of the science of life, I do not wish it to be understood that we are to do more than spread abroad such sound ideas of enlightened hygiene as will enable the people to cooperate with us in correcting all those formidable obliquities—physical, mental and moral—which are insidiously polluting the stream of humanity, so that the race may move onward and upward, in purity of type, to a higher and nobler manhood. In the furtherance of this end, I believe our Association will exert a powerful influence. Such publications as your President now proposes cannot be misconstrued—they cannot be tortured into violations of the code. If by any means they can, then let us amend our platform—add a new clause to our ethics—so that we do not prove recreant to that duty which even our very title of doctors, *teachers*, implies. No wisdom, however mature, could at once have originated a system competent to meet all the exigencies time and progress may give rise to. As our Association advances towards the consummation of its purposes, it must be expected that new necessities will arise, and experience in the working of the plans laid out at first will demonstrate the nature of the changes for adaptation to existing circumstances."

In conclusion, he recommended that the alternate meetings of the Association be held at Washington, as heretofore.

The speaker received the thanks of the Association, and the address was, according to custom, referred to the Committee on Publication.

REORGANIZATION OF SECTIONS, ETC.

DR. E. LLOYD HOWARD, of Maryland, presented the Report of Special Committee on Reorganization of Sections and Publication of Transactions, and moved that it be made the special order of business for 10 A.M., Wednesday.

The St. Louis Mutual Life Insurance Company extended an invitation to the members of the convention to visit their new building, on the corner of Sixth and Locust streets.

A letter was read from Postmaster C. I. Filley, of St. Louis, tendering the members of the Association special postal facilities in the shape of an extra mail-box, etc.

A paper on the education of the last census, by Dr. E. Seguin, of N. Y., was offered, and referred to its appropriate section.

The several committees were then called upon for reports, the majority of whom reported progress, and were continued. The report of Dr. Pollok, "on Medical Education," was made the special order for Thursday, 11 A.M.

After the transaction of business of minor importance, the Association adjourned until 9.30 A.M., Wednesday.

PROMENADE CONCERT IN EVENING.

The members enjoyed a Promenade Concert during the evening, at Mercantile Library Hall. The music consisted of a double orchestra of thirty pieces, under the leadership of Prof. A. Waldauer. The stage was beautifully decorated with flowers, and all the other arrangements were dictated by a refined taste, and reflected credit upon the Committee of Arrangements. A suitable refreshment was also provided, which was tasteful in every sense of the word.

SECOND DAY, *May* 7, 1873.

DR. T. M. LOGAN, President, in the Chair.

The meeting was called to order by the President, at 9.30 A.M.

An invitation was read by W. B. Atkinson, Secretary, from Mr. Dyer, to visit the Mercantile Library.

COMMITTEE ON NOMINATIONS.

The following Committee on Nominations was next announced:—

Arkansas, A. L. Brysacker; Alabama, G. Moses; Connecticut, W. A. Wainwright; District of Columbia, F. Howard; Georgia, J. P. Logan; Illinois, H. A. Johnson; Indiana, W. H. Meyers; Iowa, A. M. Carpenter; Kansas, D. W. Stormont; Kentucky, R. H. Gale; Maine, A. Gardlow; Maryland, S. P. Smith; Massachusetts, L. F. Warner; Delaware, H. F. Askew; Michigan, W. Brodie; Minnesota, A. B. Stuart; Missouri, J. B. Johnson; Mississippi, J. W. M. Shattuck; New Hampshire, E. F. McQuesten; New Jersey, S.

Lilley; New York, H. W. Dean; North Carolina, R. J. Hicks; Ohio, A. Dunlap; Pennsylvania, W. J. Asdale; Rhode Island, L. Morton; Tennessee, W. T. Briggs; Texas, D. R. Wallace; Virginia, T. D. Cunningham; West Virginia, G. Baird; Wisconsin, E. P. Russell; United States Army, B. A. Clement; United States Navy, E. Eversfield.

CONCERNING SECTIONS AND REORGANIZATION.

DR. E. L. HOWARD read his report on Reorganization of Sections, &c., recommending among other things the presentation of papers before said Sections in abstract, and the propriety of referring all lengthy documents to a sub-committee.

Resolved, That section 9, article 1, of the by-laws be amended to read as follows:—"The reading and consideration of the reports of the standing committee of publication and prize essays, and of chairman of sections."

Resolved, That article 1 of the by-laws be amended as follows:—"In first paragraph strike out order of sections," as it now stands, and insert instead, "new arrangement of sections." After second paragraph insert:—"The section on State medicine and public hygiene shall be composed of one member from each State, representing, as far as practicable, the State Boards of Health, the officers of this section to be also designated by the Committee on Nominations." "The chairman of the several sections shall prepare and read in the general sessions of the Association papers on the advance and discoveries of the past year, in the branches of science included in their respective sections; the reading of such papers not to occupy longer than forty minutes for each." After third paragraph insert:—"No paper shall be read before either of the sections, the reading of which occupies more than twenty minutes. Such papers shall be referred by the section to sub-committees specially appointed for their examination. The sub-committees shall be allowed thirty days for such examinations, at the end of which time they shall forward the papers to the Committee of Publication, with such recommendation as they may deem proper. The authors of such papers, however, may read abstracts before the session within the allotted twenty minutes. No member shall address the session more than once upon the same subject, nor speak longer than fifteen minutes without unanimous consent."

Resolved, That article 3 of the by-laws be amended as follows: Strike out all that relates to the Committee on Medical Education, on Medical Literature, and on Climatology and Epidemic Diseases; and insert in first paragraph, after Committee on Prize Essays, "Committee on Ethics" In place of fourth paragraph insert:—"The Committee on Ethics shall consist of nine members, to serve for three years, and until their successors are appointed, any vacancies occurring to be filled for the unexpired term by the Committee on Nominations. Their duties shall be to examine and adjudicate all questions of a personal character, including complaints and protests, and all questions on credentials that may be referred to them by the Association. The decision of the committee shall be final, until reversed by the Association, but no appeal from their decisions shall be brought before the Association until the following year."

Resolved, That article 4 of the by-laws be amended by adding—"The Committee of Publication shall have full discretionary powers to omit from the public transactions, in part or in whole, any paper that may be referred to it by the Association, or either of the societies, unless specially instructed to the contrary by vote of the Association."

Resolved, That a new section (11) be added to the by-laws, as follows:—"No new business, resolutions by members, etc., shall be introduced at the general sessions of the Association, except on the first and fourth days of meeting."

DR. BRONSON, of Massachusetts, submitted a minority report, objecting to that portion of the previous report specifying the duties of the Committee on Ethics. He proposed to limit their duties to all questions of a personal character, including complaints, protests and all questions as to credentials. The committee to act forthwith and to report their proceedings to the Association, to be disposed of by a majority vote.

PROPOSITIONS BY DR. S. D. GROSS.

A letter was read from Professor Gross, urging the adoption of an amendment proposed by him at the previous meeting of the Association to the following effect:—

That, instead of a report on medical education, on medical literature, and climatology and epidemic diseases, there shall be annually delivered before the Association, at its general meetings, an address in medicine, an address in surgery, an address in midwifery, or the diseases of children, the lecturers to be appointed this year by the President; afterwards by the Committee on Nominations.

DR. N. S. DAVIS moved that the report of the committee be received, and all except that referring to the Committee on Ethics be adopted.

DR. PORTER spoke against the amendment.

The previous question was called and Dr. Davis's motion prevailed.

SUGGESTIONS FOR IMPROVING THE ASSOCIATION.

DR. DAVIS next offered the following amendment to the by-laws:—

A Council, consisting of twenty-one members, shall be appointed by the Nominating Committee, whose duty it shall be to take cognizance of and decide all questions of an ethical or judicial character that may arise in connection with the Association. Of the twenty-one members of the Council first appointed the seven first named in the list shall hold office one year, and the second seven named shall hold office two years. With these exceptions, the term of office of members of the Council shall be three years, seven being appointed by the Nominating Committee annually.

The said Council shall organize by choosing a President and Secretary, and shall keep a permanent record of its proceedings. The decisions of said Council on all matters referred to it by the Association shall be final, and shall be reported to the Association at the earliest practical moment.

All questions of a personal character, including complaints and protests, and all questions on credentials, shall be referred at once, after the report of the Committee of Arrangements, or other presentation, to the Judicial Council, and without discussion.

DR. DAVIS also proposed, as an addition to the Code of Ethics, section twelve, to add, "and that three members be annually appointed to deliver addresses on medicine, obstetrics and diseases of women and children, no address to occupy more than forty minutes in its delivery."

On motion of DR. E. L. HOWARD, these documents were laid on the table and the original report of the committee adopted.

REORGANIZATION OF ARMY MEDICAL CORPS.

The hour having arrived for the reception and consideration of a report upon a reorganization of the Army Medical Corps:

DR. J. J. WOODWARD, Assistant Surgeon U. S. A., read the following:—

"*To the President of the American Medical Association:* SIR—It is proposed to present herewith a brief statement, showing that the medical staff of the United States army has not been placed on an equal

footing with the other staff corps of the army as regards rank, that they have not had the same consideration shown them in this respect as has been accorded to the navy, and that the record of services of this meritorious body of officers entitles them to the same advantages that have been granted to others.

"When the rebellion broke out the medical staff of the army, with a total of 115 officers, had but one of higher rank than that of a major, while in the quartermaster's department, with thirty-seven officers, five were above that rank; in the commissary department, with twelve officers, two were above that rank; in the adjutant-general's department, with fourteen officers, two were above that rank; in the engineers, with 129 officers, there were seven; in the pay department, out of a total of twenty-eight, there were three, and in the ordnance department two out of thirty-six.

"The act of Congress, July 28, 1866, defined the 'Peace establishment of the United States,' and reorganizing, as it did, with the view of permanence, all the various departments of the army, it might have been supposed that equal justice in the matter of rank would have been meted out to each separate branch of the staff. That this was not the case so far as the medical department is concerned is shown by the following: —

"By its provisions the total number of medical officers was fixed at 217, seven of whom were above the rank of Major, or 3.22 per cent. The Quartermaster's Department was to consist of 76 officers, seventeen of whom were above that rank, or over 22 per cent.; the Subsistence Department of 29 officers, five being above that rank, or 17 per cent.; the Adjutant-General's Department of 20 officers, seven being above that rank, or 35 per cent.; the Engineers of 109 officers, of whom nineteen were above that rank, or over 17 per cent.; the Ordnance of 64 officers, with eight above that rank, or 12.50 per cent.; and the Pay Department of 65 officers, five being above that rank, or 7¾ per cent. It is thus seen that the Medical Department was given a smaller proportion of officers of rank than any other staff department, being less than one-half of that granted to Paymasters, one-quarter of that in the Ordnance, nearly one-sixth of that in the Engineers and Subsistence Departments, less than one-seventh of that in the Quartermaster's, and about one-twelfth of that given to Adjutants General.

"The medical officer under the present law is accorded the rank of Captain after three years' service; he is promoted to Major by seniority, such promotion not ordinarily occurring in less than fifteen years' service, and that is the end of his prospects of advancement, unless he may be so fortunate as to secure a Medical Purveyorship, which can necessarily be within the reach of but very few, those positions being but five in number, and vacancies in consequence occurring but very seldom. Not only is this a great injustice to those surgeons on the active list, but it operates still more injuriously toward those old and meritorious officers who, having given their best years to the country, become disabled by age or infirmity, and are desirous of availing themselves of the privileges of the retired list. The Adjutant-General, Quartermaster, or Engineer of thirty years' service can almost certainly retire with the rank of Colonel, certainly that of Lieutenant-Colonel, while the veteran surgeon is laid aside with the rank of Major, and an income hardly sufficient to support his station as a gentleman, or to sustain his family.

"The Medical Department is not willing to be accorded a second place in comparison with any other arm of the service. It points with pride to its roll of honor during the last war, to the thirty-eight of its members who were killed in action or died of wounds, to the twelve who were killed by accident in the performance of duty, to the four whose lives wasted away in rebel prisons, to the seventy-three who were wounded in battle, and to the 271 who died from the diseases and exposure of camp life (an array of figures greater than can be presented by any other staff corps), as a proof that they were always to be found where duty called.

"Without any disposition to make an invidious comparison between the Medical Department and other staff corps, it is believed that at least as high a grade of intellect, as finished an education, as eminent scientific attainments are required to make an accomplished medical officer, as obtains in any other branch of the service. In the case of the vast majority of other staff officers, this education is obtained at the expense of the government, which not only furnishes the future Adjutant-General or Engineer with all the advantages which a scientific school can afford, but actually pays him a handsome salary for four years before he is sufficiently accomplished to render any service therefor. Not so the medical officer. He must obtain his education at his own expense, usually spending years in college, in medical schools and hospitals, before he can hope to be sufficiently qualified to pass the ordeal of an examining board.

"The government cannot expect to obtain the best class of men in any branch of its service unless it offers them equal inducements to those found in civil life. So long as medical men of ability and good scientific acquirements have before them those high prizes which are found in private practice, just so long will they refuse to continue in the army, when no prospect is held out to them of ever rising above a certain grade, or of obtaining beyond a certain amount of income.

"The inducements to engaging in private practice are the prospect of increased income and reputation with advancing years. In the army, these are represented by *rank*, not only because increased rank carries with it an increase of emolument, but also because to the army officer rank is well and properly understood to enhance the dignity of the person holding it, as well as the respect in which he is held by his compeers and subordinates.

"The rank of medical officers should therefore be no less than that of the other staff corps; they require an equal education and equal abilities, they perform equally arduous duty, they sustain as great responsibilities, they are exposed to like dangers, and in the distribution of the rewards of the military career they should be entitled to an equal share. That they are not at present on this footing of equality has been clearly shown in the foregoing comparisons.

"The principles here urged have already been recognized in the recent legislation for the Medical Department of the navy, by which fifteen medical officers were given the relative rank of Captain, and fifteen that of Commander, corresponding to the rank in the army of Colonel and Lieutenant-Colonel respectively. It is held that no good reason exists why similar promotion should be withheld from the army surgeons, when its necessity has been acknowledged by law for their brethren in the navy.

"The British War Office has likewise recognized the importance of increased rank for its medical officers, in the new 'Army Medical Warrant,' and has acknowledged the force of the positions taken in this

paper, by giving such rank in recognition of long and faithful service.

"A further injustice has been done, not only to the medical staff, but to the profession at large, by the legislation which at present forbids any promotions or new appointments in the Medical Department. To the former, because, from the rapid depletion which ordinary casualties make in its ranks, it throws increased labor upon those who remain, and necessitates the employment of physicians under contract, who, having but a temporary tenure of office, cannot be expected to be actuated by that single regard for the service which is a *sine qui non* to the faithful performance of duty. To the profession at large, for it prevents many who are desirous of entering the military service from doing so, and thus perhaps compels them to abandon a design to the accomplishment of which their education may have been especially directed. There are now sixty-one vacancies in the medical staff, fifty-three of them being in the grade of assistant surgeon. Should promotion be restored, it would then take at least two years to fill the vacancies now existing.

"The result of the continuance of the present state of affairs will be, that many of the candidates for examination, and no doubt the most deserving, will, impatient at delay, seek other channels of usefulness.

"In view of all these facts, it is believed that an appeal made by so representative a body as the American Medical Association, numbering, as it does, delegates living in every Congressional district in the United States, would not be without its effect, and it is earnestly suggested to its members that they will take such action as may seem to them most proper, as will result in placing their professional brethren in the army on an equal footing with those of the navy, as well as with the officers of the other staff corps of the army, and also to throw open once more the door for the admission of the young physicians of the country to the ranks of the army medical staff." (Signed)

JOHN M. CUYLER,
Surgeon U. S. Army.
WILLIAM J. SLOAN,
Surgeon U. S. Army.
THOMAS A. MCPARLIN,
Surgeon U. S. Army.
DAVID L. MCGRUDER,
Surgeon U. S. Army.
JOHN MOORE,
Surgeon U. S. Army.
CHARLES C. GRAY,
Surgeon U. S. Army.
CHAS. R. GREENLEAF,
Ass't Surgeon U. S. A.
HENRY R. TILTON,
Ass't Surgeon U. S. A.
WM. M. NOTSON,
Ass't Surgeon U. S. A.
CHARLES SMART,
Ass't Surgeon U. S. A.

JOSIAH SIMPSON,
Surgeon U. S. Army.
JOHN F. HEAD,
Surgeon U. S. Army.
JOSEPH B. BROWN,
Surgeon U. S. Army.
BENN'T A. CLEMENTS,
Surgeon U. S. Army.
JOSEPH R. SMITH,
Surgeon U. S. Army.
WM. C. SPENCER,
Surgeon U. S. Army.
JOHN H. JANEWAY,
Ass't Surgeon U. S. A.
ALF. A. WOODHULL,
Ass't Surgeon U. S. A.
HARVEY E. BROWN,
Ass't Surgeon U. S. A.
ALEX. H. HOFF.
Ass't Surgeon U. S. A.
and others.

DR. WOODWARD remarked:—Mr. President, I had nothing to do with drawing up this letter, but I indorse it fully, as does also the Surgeon-General. It is understood that by the provisions of the army regulations we of the army are debarred from making such an appeal, but we can aid the suggestion verbally by appealing to you, gentlemen of the Association. Any army officer, except a Surgeon, can be retired in old age with a competent pay and the rank of Colonel, while a medical man can only have the rank of Major after twenty years of service, and may ask for a Lieutenant-Colonelcy at thirty years. A Lieutenant-Colonelcy is all we ask. I was an Assistant Surgeon twelve years ago, and hold the same rank yet. I have filled my contract with the Government, but it has not fully complied with its obligations. We have come up to this Convention for help. We only ask what was done for our brethren of the Naval Medical Corps, and nothing more.

DR. KELLER, of Louisville, then presented the following resolutions, which were unanimously adopted:—

Resolved, That in the opinion of this Association the rank of the medical officers of the army ought to be fully equal to that of the officers of any other staff corps, or of the medical corps of the navy. That we learn with regret that this is not the case, and that we regard with grave disapproval the odious discrimination thus made against a meritorious body of officers.

Resolved, That we look upon the law which prohibits promotion and appointments in the medical corps of the army as unwise and unjust, and that, in our opinion, it ought forthwith to be repealed

Resolved, That a committee of five be appointed by the President, to memorialize Congress on this subject, and that each member of this Association pledges himself to use all his influence with the member of Congress from his own district in behalf of the object of these resolutions.

The President appointed as the committee, Dr. Keller, of Kentucky; Askew, of Delaware; W. S. Davis, Chicago, Ill.; John Murphy, Cincinnati, O.; J. M. Toner, Washington, D. C.

DR. YANDELL said he would favor the matter if the words "rebel prisons" in the letter were changed to read "Confederate prisons." The change was accordingly made.

DELEGATES TO THE BRITISH MEDICAL ASSOCIATION.

The Secretary read the following appointments made by the President to represent the American Medical Association to the British Medical Association:—Drs. F. G. Smith, C. Wister, J. S. Cohen, of Philadelphia; Dr. E. Warren, of Baltimore; Dr. C. L. Ives, of New Haven; Dr. Edward Montgomery, of St. Louis, and Drs. F. Barker, E. Seguin, J. C. Hutchinson, of New York.

REPORT OF NOMINATING COMMITTEE.

DR. JOHNSON, of St. Louis, Chairman of the Nominating Committee, made the following partial report:—

Your committee suggest the following gentlemen for the various offices named:—

President—Dr. J. M. Toner, District of Columbia.
First Vice-President—Dr. W. Y. Gadbury, of Miss.
Second Vice-President—Dr. J. M. Keller, of Kentucky.
Third Vice-President—Dr. W. C. Husted, of Missouri.
Fourth Vice-President—Dr. L. D. Warner, of Massachusetts.
Treasurer—Dr. Casper Wistar, of Philadelphia.
Librarian—Dr. Wm. Lee.
Committee on Libraries—Dr. Johnson Elliott.
Secretary—Dr. Theodore A. McGraw.
Committee on Arrangements—Dr. Brodie, Chairman; James A. Brown, Morse Stewart, J. F. Noyes, E. W. Jenks, Henry F. Lister, D. O. Farrard, Eugene Smith; all of Detroit.
Committee on Prize Essays—Drs. J. K. Johnson, A. Sager, H. Hitchcock, of Detroit; E. Andrews, Ill.; E. S. Gaillard, Ky.
Committee on Publications—Drs. F. G. Smith, W. B. Atkinson, D. Morrey Chester, of Penn.; Wm. Lee, District of Columbia; Casper Wistar, Penn.; F.H. Askew, Delaware; Alfred Stilli, Penn.

Detroit was named for the next annual meeting of the Association. The report was adopted.

MEDICAL EDUCATION.

Dr. Carson, of Ohio, presented a report on Medical Education of which the following is an abstract:—

It is within the knowledge of the whole profession that there is much dissatisfaction regarding the important question of medical education, and particularly with reference to the results of the agitation of it in this Association. There is reason to think that at the basis of this dissatisfaction there lies a misconception of the influences affecting medical education, and of the functions of this body pertaining thereto. A proper consideration of these influences will show that some of them impose limitations upon medical education which are beyond the power of the profession or of this body to control in any great degree, and that from others are evolved the spirit and method of new teaching, which are much within the personal efforts of all physicians to direct and control, and, therefore, that the administrative agencies, under which we include every form of teaching, whether private or public, in office or college, are not responsible for failures of performance in the first direction, while in the latter they and all of us are largely so. These influences are classified as, first, those originating in the external relations of medicine, such as government, general education and culture, physical and economical necessities. Secondly, those originating in the internal relations of medicine, such as are involved in the study and practice of the accessory and direct sciences and arts of medicine. Third, there are certain conditions, derivative from these in the operation of the administrative agencies, which exert important effects upon the results of medical education. Political influence, he said, often determined the form which the instructing body should take. The first institutions for medical education were organized in a spirit of freedom, and were entirely outside of State control. He would hesitate to sanction the proposition to place medical education in the hands of the government. General education often determined the character of the professional education. There was no other feasible plan to elevate the latter than to wait the slow development of that high standard of general education requisite. The report suggested how instructions could aid materially in advancing the standard of medical education by properly grading their instruction, and concluded as follows:—We conceive, then, that by recognizing the fact that we have two classes of influences reacting on medical education, which we have called the external and the internal, of all of which it may be said that they are the products of growth under certain definite and inherent impulses, with power of adaptation modification, etc.—of the first of which it may be said that they are very stable elements, of the second it may be said that they are moving with the swift velocity of modern science. We conceive, then, that the power and function of our medical administrative agencies and of this Association may be more clearly defined. It would diminish the responsibility placed upon the schools in all matters pertaining to the external relation of medicine, while it would hold them to increased responsibility in all matters belonging to the subjective work of their position. It would show that this Association can only exert great influence by increasing its efficiency as a tribunal before which these subjects may be brought for the exercise of that most potent influence, discussion; and not for that impotent purpose of expecting to increase legislative functions towards the teaching bodies. If amendatory action be desired, for this and other good purposes, then we herewith advocate it.

The report was referred to the Committee on Publication.

REPORT ON MEDICAL LITERATURE.

Dr. Yandell, Jr., read the report on Medical Literature. The medical journals throughout the country were said to be improving and were beginning to be in consequence self-sustaining.

NO PRIZES GIVEN.

The Prize Committee could not find any one worthy of a prize.

The Treasurer's report showed a balance of $496.74 in the treasury.

The reports of the Librarian and Committee on Publication were likewise read and appropriately referred.

Dr. Toner read a statistical paper on Medical Colleges and Medical Societies.

THE LATE DR. SAMUEL HENRY DICKSON.

The Secretary read an obituary of Dr. Samuel Henry Dickson, of Philadelphia, which was ordered to be entered on the minutes.

THE MEDICAL AND SURGICAL HISTORY OF THE REBELLION.

Dr. Peck, of Iowa, introduced the following resolutions, which were unanimously adopted:—

In view of the fact that the reports of the Surgeon-General of the United States Army, as exhibited in volumes one and two of the first part of the Medical and Surgical History of the War of the Rebellion, have received a too limited circulation by reason of an insufficient issue of the same by Congress, therefore

Resolved, That the President and Secretary of this Association be directed to petition Congress at the next session in behalf of the profession, asking that the edition recently issued be reproduced in sufficient number to permit of general distribution to the members of the profession throughout the country.

Resolved, That the thanks of this Association are due and are hereby tendered Congress for aiding thus far in developing and presenting to the profession reports of the Surgeon-General, as herein specified.

Resolved, That the thanks of this Association are hereby tendered the officers of the United States Army who have by sacrifice and labor been instrumental in placing before the profession the valuable information contained in volumes one and two of the first part of the Medical and Surgical History of the War of the Rebellion.

AMENDMENT TO THE CONSTITUTION.

Dr. N. S. Davis submitted the following amendment to the Constitution or plan of organization, to be acted upon at the next annual session:—

It is proposed to strike out the second paragraph of article 2, commencing with "The delegates," and ending with "of pairs," and insert the following:—

"The delegates shall receive their appointment from permanently organized State medical societies, and such county and district medical societies as are recognized by representation in their respective State societies, and from the medical department of the army and navy of the United States of America."

Also, strike out all of the fourth paragraph of same article 2, beginning with "each local society" and ending with "one delegate," and insert the following:—

"Each State, county, and district medical society, entitled to representation, shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for each additional fraction of more than half that number. The medical staffs of the army and navy shall be entitled to four delegates each."

THE CENTENNIAL CELEBRATION.

Dr. Frederick Horner, Jr., U. S. N., offered a reso-

lution that the American Medical Association appoint a committee of one member from each of the original thirteen States of the Union, to report to the Centennial Celebration on the medical, surgical and biographical literature of the period of 1776, as a tribute to Joseph Warren, Benjamin Rush, Arthur Lee, General Hugh Mercer, and other noble and patriotic physicians who aided to secure American independence. Adopted.

PHONOGRAPHERS FOR THE SECTIONS.

DR. DAVIS introduced a resolution to provide for suitable preparations for full and careful reports of the proceedings of the various sections at the next annual meeting, which was adopted, and a committee of five appointed for that purpose.

A resolution was introduced and passed to authorize the surgical section to employ a short-hand reporter.

A paper by DR. GUION, of the United States Navy, upon the subject of medical education, was referred to the section on practical medicine.

The Association then adjourned to 9:30 Thursday.

THE MORRISON RECEPTION, WEDNESDAY EVENING.

In accordance with a previous reception, the members were entertained at the residence of Col. and Mrs. J. L. D. Morrison. Waldauer's band was in attendance, and the guests, numbering three hundred, passed a very entertaining evening. An elegant repast was furnished.

THIRD DAY, *May* 8.

DR. THOMAS M. LOGAN, President, in the Chair.

DELEGATES TO BRITISH MEDICAL ASSOCIATION.

The Secretary announced that Dr. O'Hagar, of North Carolina, and Dr. Eades had been added to the list of foreign delegates already published.

NOMENCLATURE OF DISEASES.

The Chairman of the Committee on Nomenclature of Diseases made the following report:—

In accordance with the resolutions appended to the minority report of the committee, adopted by the Association at its last meeting, one thousand extra copies of the proposed nomenclature were printed in pamphlet form, and distributed to the profession and to the various medical journals, both at home and abroad; and that such criticisms and suggestions as would represent their opinions as to its merits and fitness were invited from those receiving it. To this invitation not a single response has been made by medical journals, and but from two practitioners, the latter being such additions as in the judgment of these gentlemen would render the work more complete, but which in the judgment of the majority describe symptoms which none but a specialist could recognize. From this statement of the results of a year's consideration of the proposed nomenclature, the conclusion may be drawn that the profession are satisfied with the work. Your committee are not willing to entertain the only other conclusion, that men of culture and practical men are indifferent upon a subject of such importance; they therefore again present the resolution appended to the majority report and ask for its adoption:—

Resolved, That the report of the Committee on the Nomenclature of Diseases be referred to a special committee of five members, to be appointed by the President, who shall examine it and report upon its final disposition, at the present meeting of the Association.

Resolved, That on the favorable report of such committee it shall be referred back to the Committee on the Nomenclature of Diseases, for the preparation of an index to be published with it, in the forthcoming volume of the transactions.

The Secretary moved the adoption of the report.

DR. WOODWARD opposed the adoption of the motion and gave in detail his reasons therefor. He then offered the following as a substitute:—

Resolved, That in the opinion of this convention it is inexpedient to adopt the nomenclature and classification presented by the majority of the Committee on Nomenclature at the meeting in Philadelphia.

Resolved, That a committee of three be appointed by the President, whose duty it shall be to communicate the foregoing resolution to the proper Committee of the Royal College of Physicians of London, and to negotiate for the representation of the American Medical Association in the first decennial revision of their nomenclature.

Adopted.

PERMANENT MEMBERS.

The Committee on Nominations, to whom was referred the subject of permanent membership, reported through their Chairman, Dr. J. B. Johnson, the following names for admission to the Association:—

Edwin Stewart, Mendon, Michigan; G. L. Polk, Acola, Illinois; T. W. Hollowbush, Warsaw, Illinois; John Shore, St. Louis; Wm. Van Zant, St. Louis; Daniel Lichty, Rochelle, Illinois; B. F. Edwards, Kirkwood, Missouri; L. A. Grimes, Lewis County, Missouri; C. W. Crary, St. Louis; L. T. Newman, St. Louis; George F. Center, Olney, Illinois; Drs. R. J. Mitchell, Lewis Wilcox, R. J. Allmond, W. C. Day, R. T. Cowan, and Edwin Blakesley, all of Illinois; John E. Faber, St. Louis; Dr. Randall, Illinois; Dr. Vinnedge, Lafayette, Indiana; Charles N. F. Ludwig, St. Louis.

DR. TONER, D. C., presented the following resolution in regard to an

INTERNATIONAL MEDICAL CONGRESS:—

Resolved, That, in the opinion of this Association, it would be an excellent opportunity, at the American Centennial in 1876, for an International Medical Congress to consider, and, if practicable, to adopt, a uniform classification and nomenclature of diseases, to be used by the profession throughout the world.

AMERICAN AND FOREIGN WINTER CURES.

A letter was read from DR. H. R. STORER, residing at present in Mentone, near the Mediterranean, asking the Association to examine into the comparative merits of foreign and American winter cures. The communication was referred.

CASE OF DR. PALUEL DE MARMON, OF KING'S BRIDGE, N. Y.

DR. DAVIS, Chairman of the Committee on Ethics, reported in the case of Dr. De Marmon, against whose admission last year at Philadelphia a protest was made, as follows:—

"Dr. De Marmon held credentials as a regular delegate from the Westchester County Medical Society in New York, to the meeting of the Association in 1872. But at that meeting a protest against his admission was made, on the ground that he was on trial for unprofessional conduct in his local society. The subject was referred to this committee at so late a period of the meeting that it could not be acted upon. From the evidence recently presented to our committee, it appears that the trial of Dr. De Marmon is still unfinished in the Westchester County Medical Society; that said Society has formally withdrawn his credentials as a delegate to this convention, and con

sequently no present action in the matter is required by this Association."

Adopted.

THE PATHOLOGICAL SOCIETY OF BERKS CO., PENN.

The following report of the same committee was likewise adopted:—

"At the meeting of the American Medical Association in Philadelphia, May, 1872, objections were made to the admission of delegates from the Pathological Society of Berks county, Pa., on the ground of unprofessional conduct on the part of many of the members of that Society. Time not permitting a full hearing of the case during that meeting of the Association, a report on it was postponed until this meeting of the Association. In the mean time, the accused parties were duly notified of the charges, and requested to make answer thereto. After a full investigation of the case, your Committee on Ethics, appointed in 1872, declare a sufficient number of the charges sustained to justify the recommendation that the said Pathological Society of Berks county be not allowed a representation in this Association."

SALARY OF THE PERMANENT SECRETARY.

The committee appointed to consider the propriety of giving the Permanent Secretary a salary, made a report adverse to specifying any fixed sum for that officer.

DR. KELLER, of Louisville, after considerable discussion, offered the following, which was adopted:—

Resolved, That the sum of $500 be appropriated as an honorarium for the services of the Permanent Secretary during the present year, provided such an amount remains in the treasury after paying necessary expenses.

NATIONAL SANITARY BUREAU.

DR. BELL, of New York, offered the following:—

Resolved, That, in the judgment of this Association, the establishment of a National Sanitary Bureau, with relations to the General Government similar to those of the Bureaus of Agriculture and Education, is highly desirable as a means of promoting sanitary science and the protection of the public health.

Resolved, That this Association request of the United States Educational Bureau to so extend its scope of inquiry as to include vital diseases and mortuary statistics, in relation to local meteorological and geological influences, and to disseminate the information so collected throughout the country.

The resolutions were adopted and referred to the Committee on Public Hygiene.

DR. M. A. PALLEN offered the following:—

Resolved, That Congress be memorialized to create a Sanitary Bureau, and that it be under the control of the Surgeon-General of the U. S. Army.

Lost.

DR. BELL said the resolution of Dr. Pallen would not meet the ends desired. It would have to go through the circumlocution offices at Washington, and it would be years before anything could be accomplished. He was opposed to the substitute.

The original resolutions were then adopted.

The hour of 11 having arrived, the special order of business set for that time,

REPORT ON MEDICAL EDUCATION,

was taken up. DR. POLLOCK, chairman of the committee, presented the following report:—

"The committee appointed by the President at the last meeting of the Association, to take into consideration the propriety of adopting the suggestions of the Committee on Medical Education, are fully impressed with the importance of the subject, and acknowledge the value of the suggestions offered. But we believe it wholly impracticable to carry into operation any law which does not meet the hearty approval of the diverse interests connected with the teaching and practice of medicine. And while we have no doubt that this Association has grown to be a power in the profession, felt and recognized by all, yet to make this power effective its decisions should be calm and deliberate; therefore, your committee, after due deliberation, have concluded to recommend the adoption only of the conclusion of the report of the Committee on Medical Education, which is as follows:—That a Congress composed of two members from each State and Territory, and one from each recognized medical college, all to be members of this Association, be appointed (or nominated by the Nominating Committee) at this present session; that said committee or Congress shall meet three days previous to our next annual meeting, and that said committee or Congress shall perfect a plan for some uniform system of medical teaching, which, when adopted by the Association, shall be the only recognized method of medical teaching in the United States."

Considerable discussion followed. First, the report was adopted, by a close vote; then a motion was made to reconsider the vote, which was done. Then a motion was made to lay it on the table; then that motion was withdrawn.

DR. KELLER, who had seconded the motion to lay it on the table, contended that the gentleman who made the motion had no right to withdraw it without consent of the second. He did not consent, but insisted on the motion to lay the report on the table.

DR. YANDELL was opposed to the clause of the report which referred to the election of one from each medical college by the Nominating Committee. With that exception he would be in favor of the adoption of the report.

DR. BRODIE, of Massachusetts, thought there were other objections to the report, and that it was a usurpation of authority.

The motion was put by the Chair, and the report was finally laid on the table.

The paper on yellow fever, presented by Dr. Mitchell, of Brenham, Texas, was called up and referred to the section on the theory and practice of medicine.

DR. J. P. GARRISH, of New York, extended an invitation to the members of the Association to visit New York, and when there not to miss the chance of seeing the Medical Library of New York.

ELECTING OFFICERS.

DR. E. L. HOWARD, of Maryland, presented the following resolution, which was, by the rules, laid over until the next meeting:—

Resolved, That article 4 of the Constitution be amended as follows:—Strike out second clause of first paragraph and insert: "They shall be nominated by the Judicial Council, and shall be elected by vote on a general ticket."

APPOINTMENTS FOR 1874.

The Committee on Nominations presented the following report of officers of sections and committees for 1874:—

Practice of Medicine, Materia Medica and Physiology—Chairman, N. S. Davis, Illinois; Secretary, Dr. Frothingham, Michigan.

Obstetrics and Diseases of Women and Children—Chairman, Theophile Parvin, Indiana; Secretary, Montrose A. Pallen, Mo.

Surgery and Anatomy—Chairman, S. D. Gross, Pennsylvania; Secretary, Alonzo Garcelon, Maine.

Medical Jurisprudence, Chemistry and Psychology—Chairman, A. N. Tully, South Carolina; Secretary, E. L. Howard, Maryland.

State Medical Publications and Hygiene—Chairman, A. N. Bell, New York; Secretary, A. B. Stuart, Minnesota.

State Medicine and Public Hygiene—F. A. Ross, Alabama; D. A. Linthicum, Arkansas; T. M. Logan, California; R. G. Buckingham, Colorado; B. H. Catlin, Connecticut; L. P. Bush, Delaware; F. Howard, District Columbia; W. F. Westmoreland, Georgia; H. A. Johnson, Illinois; W. H. Myers, Indiana; J. J. N. Angier, Iowa; D. W. Stormont, Kansas; Louis Rogers, Kentucky; S. Fitch, Maine; James Stewart, Maryland; H. I. Bowditch, Massachusetts; R. C. Kedzie, Michigan; A. B. Stuart, Minnesota; J. W. M. Shattuck, Mississippi; John S. Hodgen, Missouri; John F. Parsons, New Hampshire; E. M. Hunt, New Jersey; A. N. Bell, New York; W. A. B. Norcon, North Carolina; Wm. Clendennin, Ohio; A. M. Pollack, Pennsylvania; E. M. Lenox, Rhode Island; R. A. Kinlock, South Carolina; W. T. Briggs, Tennessee; D. R. Wallace, Texas; J. L. Cabell, Virginia; J. Bromfield, West Virginia; H. B. Stung, Wisconsin; A. T. Woodward, Vermont; S. M. Bernis, Louisiana.

Resolved, That the Secretary of the Association be authorized to fill up all vacancies in the committee from the States and Territories.

Also, that Dr. A. N. Bell be President, and Dr. A. B. Stuart as Secretary.

Judicial Committee, Three Years—Drs. Brodie, Michigan; Davis, Illinois; Howard, Maryland; Baldwin, Alabama; Dean, New York; Logan, Georgia.

Two Years—Joynes, Va.; Todd, Ind.; Askew, Del.; Morgan, D. C.; Lillie, N. J.; Benham, Pa.; Dunlap, O.

One Year—Bartlett, Wis.; Powell, Ill.; Gale, Ky.; Moses, Mo.; Hughes, Ia.; Bemis, La.; Bronson, Mass.

Necrology—Chairman, A. Sager, Mich.; and the committee to remain as last year, excepting Alonzo Garcelon, of Maine, in place of Dr. D. McRuer, deceased; D. W. McCabe, Kan.; J. W. H. Baker, Iowa; J. D. Wheeler, N. H.; Dr. Millegan, Minn.; W. M. Chambers, Ill.; G. Sutton, Ind.; A. J. Sands, Ga.; B. A. Naugh, Miss.; Geo. Mitchell, O.; J. J. Woodward, U. S. A.; N. M. Dodson, Wis.; J. B. Yandell, Ky.; Dr. Stuart, Winona, Minn.

Dr. H. R. Storer was appointed chairman of the special committee to report on American as compared with foreign winter cures.

The report was adopted.

Dr. McPheeters called up the amendment proposed to the proposed amendment to the Constitution, in regard to the

UNITED STATES MARINE HOSPITAL SERVICE.

The proposed amendment was:—"That the United States Marine Hospital Service be placed in the same relative position in the American Medical Association as the Medical Departments of the United States Army and Navy," is proposed to be amended by the addition of the following provisions:—"Provided that the said Marine Hospital Service does not differ in permanence of character from the United States Army and Navy services, and that it is not subject, in official appointments and regulations, to partisan or political influence and authority; and provided, further, that nothing herein contained, and nothing contained in the plan of organization, shall be so construed as to authorize the recognition, as constituent, of any institution or body, or the admission or retention as delegate or member, of any practitioner of medicine, unless such institution, body or practitioner be of a character, description or class which was fully and clearly recognized and approved as of unquestionable standing, and so entitled to representation or admission, at the date of the adoption of said plan of organization; or unless such institution, body or practitioner shall thereinafter be so recognized and approved by legal amendment of said plan of organization."

On motion of Dr. N. S. Davis, the matter was laid on the table till next year.

Dr. Pallen announced that carriages would be in waiting at the hall from 1.30 to 2 o'clock to-day, to convey the members to Tower Grove Park and Shaw's Garden.

REPORT OF COMMITTEE ON THE CINCHONA TREE.

The committee appointed by the American Medical Association to memorialize Congress on the cultivation of the Cinchona tree in the United States, beg leave to present the following report:—

The memorial which was prepared by your committee and indorsed by the Association was duly presented in Congress and referred to the Committee on Agriculture. No further action appears, however, to have been taken upon it.

Your committee, however, has not been idle, as will be seen by the following facts:—

A committee was appointed by the Medical Society of the State of California, at their annual meeting in 1870, to address the Legislature of California and petition that honorable body to appropriate suitable lands for the purpose. Drs. A. B. Stout and T. M. Logan were the committee selected. These gentlemen prepared a bill, which was introduced near the close of the last session of the Legislature. Owing to the fact that this bill was introduced so late in the session, it was not passed. A very favorable feeling was expressed towards the matter, however, and your committee have no doubt that a similar bill will be introduced and the lands granted.

In the mean time the chairman of your committee had opened a correspondence with the Hon. Mr. Watt, Commissioner of Agriculture. Mr. Watt gave assurance of his cordial co-operation in this matter, and has promised to supply whatever seeds may be desired.

A correspondence has also been carried on between the Commissioner of Agriculture, the State Medical Society of California and a certain F. A. C. Grebner, who has had fourteen years' experience in the cultivation of this plant in Java, and who is willing to assist in the introduction of the plant into this country.

In accordance with these facts, a second memorial has been prepared for presentation to Congress, which is herewith presented.

Bearing in mind the fact that, although Dr. Royle drew the attention of the British Government to the importance of this matter and earnestly urged their action as early as 1839, it was not until twenty years thereafter that the first step was taken in what has proved to be so successful an undertaking as the cultivation of Cinchona in India; and knowing that this matter is already receiving favor here, your committee feel that their efforts have not been entirely useless.

Your committee would further suggest that, since Dr. Antisell has been appointed upon a commission which will compel his absence from the United States for

some years, and will prevent his co-operation with the other members of the committee, the name of Dr. A. B. Stout, of San Francisco, be substituted for his, and that the committee as thus constituted be continued.

THE MEMORIAL.

To the Honorable Senate and House of Representatives of the United States of America:—

Whereas, the American Medical Association, composed of delegates appointed from the State, county and local Medical Societies throughout the whole United States, constituting therefore the highest medical authority of the country, presented to Congress nearly two years ago a memorial in which they asked Congress for the appointment of a commission of scientific men to determine certain points in connection with the cultivation of the Cinchona tree in the United States; and

Whereas, some of these points have already been determined by other experiments in this direction, and the Department of Agriculture is prepared to furnish any needed quantity of the seeds; and

Whereas, the cultivation of this tree has already been successfully tried on a large scale by the English and the Dutch Governments, and the American Medical Association believe that its cultivation by this Government would be productive of a very considerable revenue, provided that a proper soil and climatic conditions exist in the United States, which conditions the committee of the Association are convinced do exist:

Therefore, The American Medical Association would, through its committee, again respectfully ask the appointment by Congress of a commission of scientific men "to determine what portion, if any, of the public domain of the United States will produce Cinchona, and which may be set apart for the purpose."

For the Committee:

LEMUEL J. DEAL, M.D., Philadelphia, Chairman.
THOMAS M. LOGAN, M.D., Sacramento.

By order of the Association:

DAVID W. YANDELL, M.D., President.
WM. B. ATKINSON, Permanent Secretary.

VOTE OF THANKS TO COL. MORRISON

was offered by Dr. Angiar:—

Resolved, That we hereby tender our sincere thanks to Col. and Mrs. J. L. D. Morrison for the hospitalities extended to, and so greatly enjoyed by this Association, last evening.

PHONOGRAPHERS FOR THE SECTIONS.

The committee appointed to devise and recommend some plan for securing a more complete report of the doings in the several sections of the Association, respectfully report the following resolutions, and recommend their adoption:—

Resolved, 1. That the Committee of Arrangements for each annual meeting of the Association are instructed to secure the services of a sufficient number of stenographic reporters to have one in attendance on the regular sessions of each of the sections in the afternoon as well as during the general morning sessions; that the reports thus obtained be printed the same evening on slips or proof-sheets, in sufficient number to supply all the members of the Association in attendance early the following morning.

Resolved, 2. That the necessary expenses incurred in carrying into effect the foregoing resolution shall be paid from the treasury of the Association in the same manner as other bills relating to the publication of the transactions.

Resolved, 3. That the acting Secretary of each section shall keep a file of so much of the reports as relate to the business of the section to which he belongs and it shall be his duty to revise the same, carefully eliminating therefrom all that is unimportant, and arranging that which is found valuable and pertinent in proper form, he shall transmit the same to the Permanent Secretary, for the Committee of Publication, within twenty days after the adjournment of each annual session of the Association.

The report was adopted.

DR. E. L. HOWARD offered the following:—

Resolved, That the Chairmen of the various sections shall have free scope in the selection of subjects for addresses. Adopted.

THE NEXT MEETING.

The time of holding the next annual meeting in Detroit was changed to the first Tuesday in June.

After the transaction of business of minor importance the association adjoined *sine die*.

Medical Items and News.

THE NEW HEALTH BOARD of New York organized May 14, and issued some regulations abolishing the special office of Sanitary Permit Inspector, transferring the duties of the same to the Secretary of the Board.

BARON JUSTUS LIEBIG, who died at Munich, Bavaria, April 18, was a native of Darmstadt, where he was born May 12, 1803. He was educated in the "Gymnasium" of his native town, in the university of Bonn, and graduated in medicine at Erlangen. When nineteen years old he went to Paris, where he remained two years, and studied chemistry. By the influence of Humboldt he was appointed Adjunct Professor of Chemistry at Giessen when he was twenty-four. In 1826 he became professor, and established the first laboratory opened in Germany for the teaching of practical chemistry. In 1832, with Wöhler, he established the *Annalen der Pharmacie*. In 1840, in response to the invitation of the British Association, he published the work entitled "Chemistry in its application to Agriculture and Physiology." This and subsequent publications of the same nature led to the establishment of new professorships in Göttingen and Würzburg for the express purpose of facilitating the application of chemical truths to the practical arts of life. In 1842 he presented to the British Association a second report entitled "Animal Chemistry, or Chemistry in its application to Physiology and Pathology." Later, he issued two works having the same bearing, viz. "The motions of the Juices in the Animal Body," and "Researches on the Chemistry of Food." These were followed by the "Dictionary of Chemistry," which was compiled with the assistance of Wöhler, and "Letters on Modern Agriculture," published in 1859. He was created a Baron in 1845 and continued in Giessen, notwithstanding offers of professorships in other universities, until 1852, when he accepted the professorship at Munich, where he also became president of the chemical laboratory, and President of the Academy of Sciences, succeeding Thiersch. He is justly considered as one of the great benefactors of the age, both for the practical knowledge he diffused, as well as for the impulse he gave to scientific research.

DR. R. CRESSON STILES, formerly Sanitary Superintendent under the Metropolitan Board of Health, recently died at Westchester, Pa., of pneumonia, at the age of forty-three years.

Original Lectures.

ON ATROPINE.

A LECTURE DELIVERED AT THE WOMEN'S COLLEGE OF THE NEW YORK INFIRMARY.

By MARY C. PUTNAM, M.D.,

LECTURER ON MATERIA MEDICA AND THERAPEUTICS.

PART II.

THERAPEUTICAL APPLICATIONS.

. . . . . .

Besides those already well known, upon which we have insisted careful study of the physiological action of atropine is continually leading to new applications in therapeutics. I have spoken to you of the suggestion made by Harley, in regard to the use of atropine as a diuretic, and as especially adapted for the treatment of albuminuria. I have had no opportunity to test this suggestion, and do not know whether it has been tried by other physicians than Harley. Upon another theoretical deduction I will however insist, as I have begun to collect some practical evidence in its favor. The dilatation of the cerebral blood-vessels, that occurs as a secondary effect of atropine,* suggests the utility of this substance in functional cerebral anæmia. One case in which I tried atropine was that of a woman, who, three weeks after confinement, and being then in a debilitated condition, fell down a flight of stairs. She remained insensible for two hours, and for two days was unable to walk, although she had received no external injury but a bruise on the shoulder. On the fifth day she was still so giddy that she would fall unless she supported herself as she walked, and suffered from continual nausea, general muscular weakness, and occasional blurring and blackening of vision—all persistent effects of the cerebral concussion. I ordered 1-64th of a grain of atropine in solution, three times a day. The patient felt a sensible improvement in strength after each dose, as soon as its physiological effects, flushing of the face, increased dizziness, and a certain mental apprehensiveness, had passed away. On the following day, the vertigo and staggering had quite gone. In the second case, the diagnosis was more obscure. The patient presented herself at the Dispensary for Nervous Diseases, complaining of vertigo, general muscular debility, and especially paresis of the right arm, without any trembling. There was a faint blowing murmur at the apex of the heart.† Atropine was given, as an experiment, to try the effect upon the vertigo, 1-64th of a grain, at first three times, afterwards twice a day. The physiological effects, as in the first case, were extremely well marked—the flushing of the face intense, and lasted an hour. Under this treatment the vertigo entirely disappeared, and the patient gained in strength. The treatment was afterwards complicated with nutritive tonics and electricity. In a third case of cerebral and general anæmia, without any sign of local cerebral lesion, but with vertigo and floating specks before the eyes, the vertigo quite disappeared under the exclusive use of belladonna extract. The other anæmic symptoms were only relieved by blood tonics.

. . . . . .

Finally, there remains for us to say a few words on the so-called antagonism existing between belladonna and opium, in cases of poisoning. Let us notice, in the first place, that the real antagonism conceivable is not that between opium and belladonna, but between some of the effects produced by the one in the living organism, and those determined by the other. Now, there are no two substances whose entire series of physiological effects are directly opposed to each other. There are no true antidotes to poisons but such agents as effect a chemical alteration of the toxic substance, and opium and belladonna have no such mutual reaction. Moreover, it is certain that the physiological effects of the two drugs are not in all points contrasted. Mitchell,* Eulenberg,† and Harley‡ have shown, both in experiments upon animals and in observations upon man, that opium and belladonna, taken in succession, caused greater acceleration of the pulse than the belladonna alone; also that when sleep has been induced by a therapeutic dose of morphine, atropine will not disturb, but rather render it more profound. (Harley.) The anæsthesia, diminution of secretions, dysuria, produced by one of these substances, are determined by the other also, and cannot therefore be antagonized. But, on the other hand, the pupils contracted by morphine were seen to widen by atropine, or the reverse, and the respiration, slackened by morphine, to be slightly accelerated by atropine. (Erlenmeyer.) Again, though morphine prove unable to slacken a pulse accelerated by atropine, the fact that atropine accelerates a pulse that has been slackened by morphine is of the highest importance in toxicology. This may be seen even in the rabbit, although this animal is much more susceptible to morphine than to atropine. In a rabbit to whom I had given hypodermically three grains of morphine in the course of an hour, the pulse was 148, respiration twenty-four, pupils moderately contracted, animal in partial stupor, but not insensible. Three-quarters grain of atropine were injected, and in ten minutes the pulse had risen to 240, the respiration to thirty-two, though the pupils were not yet dilated. After injection of a grain and a half more, the ears became very hot, with marked dilatation of the arteries. This subsided again after the injection of one-half grain of morphine. On further injection, in divided doses of five grains of morphine, the pulse became very weak, but numbered about 200. Injections of five grs. atropine then restored dilatation of auricular arteries, and caused full dilatation of the pupils, one and three-quarter hours from the time of its first administration. The animal recovered completely. The effects upon the rabbit's ears were particularly noteworthy in this case. It corresponds to that observed on the ears of guinea-pigs by Wegner,§ and to the well-known experiments of Wharton Jones on the frog's foot with solution of atropine and Battley's solution of opium. The attempt to prove or disprove an "antagonism" between opium and belladonna frequently confuses the perception of the real questions, viz.: What physiological effects of belladonna are theoretically useful in the morbid state induced by opium? and further, to what extent do recorded cases of poison-

* On sacrificing a rabbit forty-eight hours after administration of large, but not toxic doses of atropine, the pia-mater of the brain and cord were found engorged with blood, and the arteries of the cord dilated. The initial constriction of the blood-vessels in the nerve-centres, upon which, we believe, M. Brown-Séquard bases the employment of belladonna in epilepsy, is not in contradiction with this equally indubitable fact.

† About six months afterwards this patient developed marked symptoms of *paralysie agitans*.

* *Am. Journal Med. Sciences*, 1865.

† *Bulletin de Thérap.*, 1867.

‡ Old Vegetable Narcotics.

§ Quoted by Stellwag. Der Intrace. Druck. P. 61. Wien, 1868.

ing show that these effects have been produced? How have others been modified? Finally, what explanation can be given of the toleration shown by many patients for one poison, while they are already under the influence of the other?

This statement of the case is so simple as to almost seem superfluous, were it not evidently so often overlooked. In the experiments of Canus, so often quoted, full toxic doses of morphine and atropine were given almost simultaneously, and before the effects of morphine had had time to become manifest; in other words, before the conditions of resistance to the one poison had been developed by the other. It was to be expected, therefore, that the animal should feel the full force of both, and succumb.

For the morphine and atropine, even when acting upon the same organ, and in an opposite manner, affect different parts of its apparatus. Thus, atropine accelerates the pulse by paralyzing the peripheric extremity of the pneumogastric; morphine slackens the pulse by increasing cerebral pressure and the tonus of the central end of the pneumogastric. It is therefore easy to understand why atropine should accelerate the pulse in spite of morphine, while morphine should be unable to reduce an atropine acceleration. When the cardiac end of the pneumogastric is paralyzed, it avails little that the tonicity of the central end be increased. And when this has been increased by the opium congestion of the encephalon, the effect on the pulse is nullified so soon as the connection between the heart and brain is severed by paralysis of the pneumogastric. Again, the contraction of the pupil, which occurs after irritation of nearly all the organs of the encephalon, is also determined by the cerebral congestion of opium. While, to produce dilatation, the atropine acts on the periphery, on the iris itself, paralyzing the motor oculi nerve, and so cutting it off from the brain, and moreover contracting its blood-vessels by stimulus of the sympathetic. It is evident that both these effects on the iris might be produced, although no change had taken place in the condition of the brain, and hence dilatation of the pupil may occur after administration of atropine in opium poisoning, yet the patient remain narcotized, and finally succumb. Thus, in Blake's case,* the child, who had swallowed a teaspoonful of laudanum during convalescence from pneumonia, was treated with eighteen drops of fluid extract of belladonna in divided doses. The pupils began to dilate after the second hour, but other symptoms were aggravated, and the patient died in thirteen hours. Here the effect of the opium was much intensified by the pulmonary disease, and the dose of belladonna was small. In one of Norris' cases at the Pennsylvania Hospital, a man of 55 years, who had taken an ounce of laudanum, was treated nine hours afterwards with eight and a half grains of ext. bellad. in divided doses during three hours. At the end of this time the pupils dilated, but the general condition remained the same, the *pulse almost insensible*, and the patient died three hours later.

Again, there are cases where the dilatation of the pupils did not occur until after enormous doses of atropine have been taken, had manifested their influence in other ways, especially by the acceleration of the pulse, and been followed by a commencement of convalescence. Here the paralytic turgescence of the blood-vessels of the iris persisted after other symptoms. Thus, in one of Blondeau's cases,† a teaspoonful of laudanum had been swallowed, and occasioned drowsiness, coldness of extremities, contracted pupils, but no coma. A fluid drachm of tincture of belladonna was given in divided doses, and the pulse and temperature rose under its influence, but the pupils remained very contracted until some time after convalescence had evidently set in.

In Duncan's case,* two ounces of laudanum had been taken, and the patient was in a profound coma when the belladonna was given. This persisted after administration of an ounce of tinct. belladonna in divided doses, and the pupils continued to contract more and more. Then fifteen grains of extract bellad. were given by the rectum, and two hours afterwards the pulse rose, and the respiration became freer. Then two grains more of the extract were given, and thereupon symptoms of belladonna intoxication occurred, with, for the first time, dilatation of the pupils. Thus the turning-point in the narcotism, as manifested by the effect on the pulse and respiration, was reached before the pupils were moved, but the return of consciousness was delayed until the moment of their dilatation.

In the remarkable case related by Constantin Paul,† where the injection of an ounce of laudanum had thrown the patient into a state of intense excitement instead of coma, but accompanied by great contraction of the pupil, a large part of the laudanum had been rejected by vomiting before any belladonna was given, and the recovery would probably have taken place without any medication. But the immediate effects of the belladonna upon the symptoms were none the less striking. Twelve drops of tinct. bellad. were given every hour, and in ten minutes after each dose there was marked amelioration of the vertigo and violent nausea, though the pupils remained contracted. The opium symptoms returned in from one-half to three-quarters of an hour, to disappear again with a fresh dose of belladonna.

By narrowing the interval between the doses, the convalescence was definitely established; but not until the patient had taken over f. ʒ ij of the tincture did pallor of the face and dryness of the mouth appear, while the pupils only dilated after ingestion of nearly f. ʒ iv. The effect of opium upon the dilatation of the pupils, in cases of belladonna poisoning, is more difficult to appreciate because it is omitted from many of the histories. In Lee's,‡ however, where a child of 6 years old, poisoned with belladonna, was treated with 120 drops of laudanum, it is said that the purple flush began to fade from the face "*as* the pupils contracted." In a case recorded in the *Dublin Medical Press* for 1864, the pupils, dilated and motionless after ¼ grain of atropine, began to contract under the administration of opium that had been preceded by an emetic; at the same time the eruption began to fade. After 4 grains of opium had been taken the pupils were normal, and the patient (who was only 2½ years old) fell quietly asleep.

But on the other hand, in a case quoted in the *Union Médicale*, 1863, where from 10–15 drops of laudanum were given to a child 26 months old, poisoned by an unknown quantity of belladonna, the pupils did not contract until some time after the patient had fallen asleep, and convulsive movements had ceased. The age of the patient in this case renders this fact all the more remarkable.

Hence observation of facts justifies the expectation of theory, that in cases of poisoning by one of the two substances, opium or belladonna, the therapeutic in-

* *Archives Gén.*, 1864. Quoted from *Pacific Journal.*
† *Ibid.*, 1865.

* *Archives Gén.*, 1864. *Am. Med. Journ.*, 1862.
† *Bulletin de Thérapeutique*, 1867.
‡ *Am. Journ. Med. Sci.*, 1862.

fluence of the other cannot be tested by the state of the pupils, although it is in their movements that the physiological opposition of opium and belladonna is most manifest. The pulse affords a much better test. In all cases of laudanum poisoning with a slow pulse that have recovered under the administration of belladonna, the pulse has risen in frequency and strength, and we have already pointed out several cases where this rise marked the entrance upon convalescence, and preceded, by a considerable interval, the dilatation of the pupil. In an observation in the *Bulletin de Thérapeutique*, 1865, the patient had taken 5 drachms of laudanum, and the belladonna was not given until 24 hours afterwards. At this time the effects of the poison were already attenuated, but there remained frequent vomiting, the pupils were contracted and the pulse 52. After hypodermic injection of 10 drops of a solution of atropine at 1 per cent., the vomiting instantly ceased, and the pulse rose to 68.

In another case in the *Lancet*, 1869, the patient was comatose, with stertorous breathing. The pulse was not counted until after the administration of ¼ grain of atropine, but it was then found at 160, and at the same instant the pupils dilated widely.

In one of Blondeau's cases,* ℥ijss of laudanum had thrown the patient into stupor, but not coma, and the extremities were cold, the pulse small, slow, and intermitting. After the administration of f. ʒ j of tinct. belladonna, in doses of 10 and 5 drops, the pulse rose, the extremities became warm, and convalescence progressed from this moment.†

In Anderson's case, *Edin. Monthly*, 1854, profound coma had set in, after ingestion of 9 grains of morphine, taken for delirium tremens during a period of 36 hours. The pulse was slow and very feeble. 8 drachms of tincture of belladonna were given in divided doses, f. ʒ j every half hour, and then the pulse rose, and became strong. At the same time the coma was quite dissipated. In this case the pupils dilated after the 3d dose, before any really favorable symptom was manifest, but the pulse, respiration, and consciousness were only affected at the ninth hour.

In Blondeau's second case (*Archives de Médecine*, 1865) 100 drops of tinct. belladonna were given in the course of an hour and a half, the patient remaining insensible, and the pupils contracted and motionless. After the last ten drops the pulse increased in force and frequency, (the pupils began to dilate at the same time). The recovery was assisted by frictions (?) of the thorax.

In McGee's case (*Am. J. Med. Sc.*, 1872) the coma, determined by 30 grains of opium, was combated by subcutaneous injections of one-fourth of a grain of sulph. atropia, in divided doses. The pulse rose to 140, and at the same time the pupils dilated and vomiting occurred, which emetics had previously failed to produce. There was afterwards some return of the opium symptoms, somnolence and contracted pupils, but these disappeared spontaneously, so that the recovery really dated from the rise of the pulse.

There is only one case on record where the rise of the pulse failed to initiate recovery. This is the remarkable case of Norris, at the Pennsylvania Hospital, where 75 grains of morphine had been swallowed, and marked somnolence had not occurred until four hours afterwards. Before this time the patient was treated with tannic acid, an emetic of sulph. zinc and ipecacuanha, a strong decoction of coffee, and 20 grains of extract of belladonna. As the coma advanced, 20 grains more of extract belladonna were given in two doses, the pupils dilated, the pulse rose from 80 to 120, but the somnolence persisted. The patient ultimately recovered under the free use of stimulants. This case much resembles that of Camus's rabbits, for the doses of morphine and belladonna were enormous, and administered nearly simultaneously, the first 20 grains of the extract having been given before the effects of the morphine were well developed. As in the experiments, therefore, the effects of the two poisons, instead of neutralizing each other, accumulated, and a belladonna coma succeeded to that induced by morphine.

In Norris's other case, already quoted, with a fatal issue, auscultation of the heart showed 120 pulsations, but these were so feeble that the pulse at the wrist was almost imperceptible. The atropine failed, therefore, to act as a cardiac stimulant.

In opium poisoning the great danger lies in the congestion of the brain. The contraction of the pupils, the coma, the slowness of pulse and respiration are of importance, as symptoms of this congestion, and the latter more especially, as initiating the mechanism of death. Any antagonist to opium that does not act as a chemical antidote in the stomach, must act by dissipating the cerebral congestion. Hence it is not easy to understand why Harley pronounces atropine useless because "it does not influence the respiration, where the action of opium is the most dangerous." The surest way to restore the respiration is to dissipate the cerebral congestion. And this may be done, when the paralysis is not too complete, by all agents that quicken the heart's action, and more especially accelerate the circulation in the brain. Now Harley himself admits that atropine "is one of the most powerful cardiac stimulants we possess,"—he points out the immediate relief to the nausea occasioned by therapeutical doses of morphine, from its depressant action on the vagus, that is afforded by small doses of atropine, which neutralize this action. It is not therefore true that the cerebral effects of morphine and atropine are not opposed to each other, and Harley's experiments, showing that the sleep induced by morphine is not disturbed, but rendered more profound by atropine, does not disprove their antagonism.

In the cases on record, the belladonna has been used when the patient was in one of two conditions: 1st, a state of restlessness and intense nausea; 2d, somnolence or complete coma. In the first case, the relief has always been immediate and striking. Thus in the first case of Behier,* the patient had been partially relieved by abundant spontaneous vomiting, but remained alternating between somnolence and extremely painful nausea and giddiness. One-fifth of a grain of ext. bellad. was given, and immediately these symptoms disappeared. In the case already referred to, recorded in the *Bulletin de Thérap.*, 1865, the effects of the laudanum, ingested about eighteen hours previously, were passing away, but the pulse was at 56, and there was frequent vomiting instantly checked by the injection of a very minute quantity of atropine. [See above.]

The same effect is seen in the case of Constantin Paul's, already quoted, where violent nausea and agitation constituted the main symptoms of the opium poisoning, and were strikingly relieved by belladonna. As has been said, a marked amelioration occurred ten minutes after each dose of twelve drops of

* Gaz. Hebd. 1865. This case already mentioned, in speaking of the dilatation of the pupil.

† This case is rejected by Harley, because the dose of laudanum was not excessive, and patient might have recovered spontaneously. Nevertheless it *does* show perfectly the mode of action of belladonna upon opiate symptoms, when these are not too intense to be modified.

* *Archives de Médecine*, 1864.

the tincture,—and this amelioration was permanent so soon as the interval between the doses was shortened from one hour to three-quarters, which was done after the sixth dose. It is not therefore correct to say, as Harley does in his comments on this case, that although the belladonna was given from the second hour after the poisoning, no decided effect was produced till the fifteenth hour. It was remarkable in this case, where the opium had produced agitation and not somnolence, the first phenomenon of definite recovery was sleep.

In the second class of cases, where the patient was comatose at the time of commencing the belladonna treatment, the effect of this latter is precisely measured by its effect on the pulse. If the pulse rises, the coma begins to be dissipated, and if the coma returns, the pulse has fallen again. That the effects of atropine, like those of other stimulants, should sometimes be only temporary, and unable to overcome the opium congestion, proves no more against the usefulness of atropine than against that of coffee or brandy. That, when the two poisons have been administered simultaneously or in rapid succession, the more energetic effect of atropine on the pulse may be manifested without any corresponding modification of the cerebral symptoms merely, shows that until the conditions of resistance have been developed by the action of one poison, the system is equally open to the effects of both; but that, in many cases of opium coma, belladonna has quickened the heart's action, and by so doing helped to dissipate the cerebral congestion; that, in a certain number of cases, this effect has been permanent, and even to be attributed to the belladonna alone, we think unquestionable.

Most of the recorded cases have been tabulated by Harley, and commented upon. It is worth while to pass briefly in review both the cases and the comments.

In the first three cases noticed, that of Norris,* Blake,† and one from the *Pacific Journal*, 1862, the administration of belladonna was unsuccessful. We have already noticed these cases, and pointed out that in none was the pulse perceptible *at the wrist*.‡

Concerning the case of Anderson, already quoted, Harley remarks that the coma persisted from 10 to 14 hours after the use of belladonna. But we have seen that it *was* dissipated as soon as the pulse rose.

In Motherwell's case,§ f. ℥ jss of laudanum had been taken, and twelve hours later the patient was completely comatose. The belladonna treatment was begun the 14th hour, and the coma did not begin to pass away before the 17th. But this was as soon as could be expected, and the amelioration coincided with dilatation of the pupils. [Nothing is said about the pulse.]

Now when, as in some cases considered above, the coma has been really aggravated by belladonna, the pupils *dilate*, without other sign of amelioration.

In Mussey's case,‖ there was coma and a pulse of 50, the fifth hour after ingestion of f. ℥ j of laudanum, which persisted in spite of vomiting induced by strong coffee at 3d hour. At 5th hour, grs. vj of ext. bellad. were taken; at 6th hour, f ℥ i tinct. bellad., and at 7th hour, coincidently with dilatation of the pupils, the pulse and temperature improved. By the 8th hour the skin was warm, pulse 100, and stupor had disappeared.

Harley overlooks these signs of improvement at the 7th and 8th hours, and insists on the fact that consciousness did not return till the 11th hour, 6 hours after administration of belladonna. According to him the coma was prolonged by the belladonna. But although the patient remained unconscious after some of the characteristic effects of belladonna were produced, the sleep lost its stupor and alarming character in two hours after the administration of the belladonna.

In Lee's case,* where a child of two years old was in a profound coma from laudanum, tinct. bellad., given in doses of 15 minims, produced a most decided effect. After the second dose the temperature of the skin rose; after the third the pupils became sensible to light, and the child spoke; after the fourth, the pupils suddenly dilated, the face, neck, and arms became scarlet, and the child began to laugh and cry in the first stage of atropine poisoning. Recovery was prompt. Concerning this case Harley says that the necessary details are omitted, because the quantity of laudanum was not stated. But it is unnecessary to know the exact quantity of the poison when the condition of the patient is accurately stated,—since in different individuals, and different conditions of absorption, the dose required to produce any given effect is very variable.

In Mitchell's case (*N. Y. Med. Journal*, vol. iv.), ingestion of grs. v. of sulph. morphine had not produced coma 4½ hours afterwards. The patient still answered questions correctly. It was at this time that f. ʒ vj tinct. belladonna were given, and as in Norris's case, already discussed, the stupor continued to increase till the 10th hour. During this time f. ʒ v of the tincture were given in two doses, and ½d gr. atropine in four doses. The first characteristic effect of belladonna appeared at the 10th hour after the first dose of atropine, when the pupils began to enlarge, and after the last dose there was a scarlet flush from head to foot, with dryness of the tongue, and soon the stupor was replaced by busy delirium.

This case is more interesting pathologically than therapeutically, for the amount of belladonna taken was relatively more poisonous than the five grains of morphine; and galvanism was administered between the sixth and tenth hours. The continual increase of the coma, during the administration of doses of belladonna themselves large enough to produce paralysis and coma, might be attributed to the cumulative effect of the two poisons, were it not for the absence of mydriasis. This always occurs in belladonna coma, and we have seen that it may occur when the system is saturated with belladonna, even though the narcotism first determined by opium persists. The pulse was already paralyzed and 170, before the atropine was given, so that no characteristic effect on it could be produced. It descended, probably under the influence of galvanism, to 150 and 140. As the atropine only dissipates the coma by quickening the pulse, it could not be expected therefore to have any direct effect upon the narcotism in this case. This case, and the analogous one of Norris (poisoning with seventy-five grains of morphine, stupor not till four hours afterwards) can only be explained by an arrest of absorption. It is on account of such arrest, from paralysis of the nervous, muscular, and secretive apparatus of the stomach, that spontaneous recovery has occurred after enormous doses of opium. Camus has collected a few such cases in his thesis.† The belladonna is absorbed as gradually as the opium had been, and being eliminated rapidly by the kidneys, does not accumulate in sufficient quantity to produce its own paralytic effects. Hence two facts,

* *American Journal*, 1862.
† *Boston Med. and Surg. Journal*, 1864.
‡ See above in regard to the cardiac pulsations.
§ *Med. Times and Gaz.*, 1862.
‖ *Am. Journ.*, 1862; also *Cincinnati Medical*.

* *Am. Journ. Med. Sc.*, 1862.
† Thèses de Paris, 1865.

observable in Mitchell's case: 1st. That the first visible effects of doses large enough to produce a coma, were those that belong not to the latter, but to the initial period of intoxication, namely, a scarlet flush and busy delirium. 2d. That a large amount of urine was passed before recovery was complete. It seems probable, and the hypothesis would be easily tested by direct experiment, that the diuresis determined by the belladonna helped to eliminate the morphine from the system. The experiments of Percy show that one-quarter grain of atropine would apparently neutralize the effects of a toxic dose of morphine, when plenty of water was allowed to the animal, and free diuresis occurred; but that death would follow when, all other circumstances remaining the same, the supply of water was cut off. Hence a second, though subordinate mode of action in which atropine may be useful in opium poisoning. In cases where its influence as a cardiac stimulant cannot be exerted, or is unavailing, it may still act as a diuretic, and favor the elimination of morphine from the system. In Lucas' case,* where a child of eleven had swallowed f. ℥ jss. of laudanum, and, three hours afterwards, was almost completely comatose, Harley lays great stress on the fact that in the treatment electromagnetism was employed as well as belladonna. But this was only given in order to arouse the patient sufficiently to swallow the belladonna, and the effect of each application was most transitory. The treatment was commenced at the eighth hour, with one grain ext. belladonnæ, and this repeated six times in the course of three hours. After the fourth dose the stertor was less marked, pupils less contracted, and pulse 104. After the sixth dose the stertor quite disappeared, the face was highly flushed, the pulse at 136. The effect of the belladonna in this case seems indubitable. Here, f. ℥ jss. of laudanum, or forty-eight times the full medicinal dose, produced coma with cold extremities and livid face in three hours, showing that absorption had fully taken place. Whereas in Mitchell's observations, just discussed, after grs. v. of morphine or only thirty times medicinal dose, we have been obliged to infer that the stomach was paralyzed by the excess, and hence absorption deferred. It is certainly difficult to explain this variable action, but the fact is incontestable,—for the patient was still able to respond to questions at four and one-half hours after the ingestion of morphine. In the absence of experiments that might easily measure the rate of absorption, hypothesis is useless, and mere guessing. It cannot be said that laudanum is always absorbed more quickly than morphine, for some of the most striking cases of delay in toxic symptoms have been observed after enormous doses of laudanum.

In Duncan's case,† Harley again attributes the prolongation of the coma to the enormous doses of belladonna (f. ℥ j tincture, and grs. xvij extract) that were given. F. ℥ ij of laudanum had been swallowed, and in one and one-half hours, patient was already almost insensible to external impressions, and sunk in a comatose sleep. After the administration of the f. ℥ j of tincture in a single dose (preceded by emesis), the coma persisted, and the pupils continued to contract, the skin grew cold and covered with a viscid sweat, the pulse imperceptible. Since the pupils remained contracted, it is difficult to attribute this coma to the action of the belladonna. When the pulse is accelerated without improvement of other symptoms, it may sometimes be questioned whether the diffusion of the opium is not thereby favored, and its toxic effects increased. But in this case no effect was produced on the pulse. Moreover, if f. ℥ j of tincture had added to the opium paralysis, the additional administration of fifteen grains of extract should have been fatal; yet after this the pulse rose, and the respiration at the same time became freer. Two grains more were given, and an hour later the pupils dilated, regained their sensibility, the patient was roused from the coma, and replied to questions.

In Adamson's case* of poisoning by laudanum, f. ℥ iij tinct. belladonna given in divided doses between 3¾ and 9 hours afterwards. From the 2d to 5th hour there was no improvement, but at the 7th hour the patient was sufficiently roused to answer questions. Harley objects to this case that other means were used besides the belladonna; but these consisted exclusively of an emetic of sulph. zinc at about the 2d hour, which induced no vomiting; and in the removal of a little fluid by the stomach-pump.

In Cazin's case, quoted in the *Edin. Monthly*, 1855, f. ℥ v of laudanum had been taken in two doses. 4½ hours afterwards the patient could not be roused from stupor and the pupils were contracted to mere points. Tinct. belladonna f. ℥ j and f. ℥ ij were given between 5¼ and 5¾ hours, and at 7th hour the pulse was stronger, the pupils began to dilate, and the stupor to lessen. The improvement continued steadily to the 10th hour, which marked definite recovery.

Harley again objects that in this case electricity and emetics were also used, and that their effects complicate those of belladonna. But these means were tried about the 4th hour, and an hour afterwards, when the first dose of belladonna was given, the patient was profoundly comatose, as above described. But improvement began about an hour after last dose of belladonna.

To resume the conclusions that may be drawn from the above analysis of observations and experiments:—

1st. If very large doses of belladonna be given *before* the establishment of opium coma, still more, if given simultaneously with the opium, the paralytic effect of both poisons may be produced. [See experiments of Camus, which I have repeated with similar results—case of Norris, case of Mitchell.]

2d. When belladonna is given alone, in doses sufficient to produce coma, the pupils dilate, and the pulse is accelerated, until after the most advanced stage, when it falls. When, therefore, a coma persists in a patient who has taken both opium and belladonna, if there is dilatation of the pupils and rise of the pulse, the coma may be attributed to the accumulated effect of both poisons. But when the pulse and respiration remain slow and the pupils contracted, there is no proof that the belladonna has exerted any influence at all, and the coma must be ascribed exclusively to the effect of opium not yet counteracted by medication.

3d. It is known that after excessive doses of opium, symptoms of poisoning are often delayed longer than when smaller quantities have been taken, and the delay is attributed to temporary paralysis of absorption. This same condition partly explains the impunity with which patients plunged in opium coma bear such enormous doses of belladonna. If only small quantities are absorbed of the mass contained in the stomach, while elimination is rapidly going on by the kidneys, some time might elapse before any great amount is circulating at once in the blood.

4th. The diuresis determined by atropine favors the elimination of the opium alkaloids, and in some cases recovery seems to be mainly due to this cause.

* Med. Times and Gaz., 1865.
† *Am. Journ. Med. Sci.*, 1862.

* *British Medical Journal*, 1866.

5th. The main action is however upon the circulation. The capillaries, paralyzed and distended by opium, are directly stimulated to contract by belladonna, and at the same time the heart is quickened by being released from pressure of the pneumogastric. A double influence is therefore exerted to dissipate congestions; and as cerebral congestion lessens, the respiration, so dangerously menaced, becomes freer.

6th. Hence the therapeutic value of belladonna in any given case must be calculated exclusively from its effect on the pulse and on the kidneys. The dilatation of the pupils only shows that the system is under the influence of atropine, not that that influence is beneficial. Coma may persist, and the patient die, with dilated pupils. This is the case when animals are poisoned by toxic doses of opium and belladonna given simultaneously.

7th. In therapeutic doses, the pulse, slackened by morphine, is always accelerated by atropine, and the reverse is not true. The effect of atropine on the pulse is relatively more energetic, for reasons above detailed. But it is certain that in the majority of toxic cases recorded, the acceleration of the pulse is only produced with difficulty, and then coincides with an amelioration of the narcotic symptoms. In the one or two instances where there was not such amelioration (case of Norris), the pulse, though accelerated, remained very feeble, so that no real stimulation of the circulation was produced, but only a double paralysis. There are cases where immense doses of belladonna have been swallowed at the very moment that absorption was beginning to take place, after the temporary stupor induced by opium, and before the establishment of coma had again diminished its activity.

8th. There is nothing either in theory, or in the observation of facts to necessitate or justify the enormous doses of belladonna that have been given. It is known that the acceleration of the pulse and rise of vascular tension are produced by small doses, and the contrary effect by large. It is more rational to administer ℥xv of the tincture at intervals of a quarter or half an hour, and this treatment has been followed by more satisfactory results than the administration of f. ℥j at a dose. It is absurd to calculate the amount of belladonna needed from the amount of opium that has been swallowed, for the neutralization required is not chemical, but physiological, and to be adapted to the reactions of the organism.

9th. The toleration of such enormous doses of an opposite poison is none the less a remarkable phenomenon in the pathology of opium poisoning. When taken simultaneously, the effects are different from those noticed when the belladonna was given some time after the opium, though before the occurrence of coma. These effects are of three kinds. 1st. No toxic symptoms may be observed. [Case of Cazin,* where a liniment containing f. ʒjss. of laudanum, and f. ʒss. tincture of belladonna was swallowed, without other result than somnolence and dilatation of pupils.]

In this case the dose of belladonna was not excessive, there was abundant diuresis [the patient had previously had complete retention of urine], and this easily explains the elimination of morphine before any narcotism could be produced.

2d. There may be severe symptoms of poisoning, but followed by spontaneous recovery. [Case of Christison,—three successive injections containing each ʒj of opium, and ℥ss of belladonna leaves.] In this case there was profound coma in three hours, with dilated pupils, showing predominance of the belladonna poisoning.

3d. Coma may set in, apparently less profound than results from opium alone, but tending to a much more rapidly fatal issue. This has only been seen in experiments on animals, for in the three cases where death has followed the belladonna treatment, the doses of belladonna were much smaller than in those that recovered. (Grs. vj of extract, in Norris's case, f. ʒ ij tincture, in Blake's, and only ℥xviij in the case of the child related in the *Pacific Journal.*)

Even therefore when several hours have elapsed after the administration of belladonna, without occurrence of any perceptible amelioration, and where the therapeutic efficacy of the drug might apparently be called in question, the problem of its tolerance remains to be explained. We have suggested a partial explanation in the condition of its absorption and elimination; we do not affirm that none other is possible nor needed. But the combination of properties possessed by atropine as a diuretic, a cardiac stimulant, and stimulator of the vaso-motor nerves, affords a theoretical explanation of its action that at least lies nearer to facts positively known than the hypothesis of vague "resistance." When a certain amount of morphine had been eliminated from the system by the kidneys, the atropine is then able to exercise its most important action on the circulation, and thus directly dissipate the cerebral congestion.

It is extremely important to settle this question by examination of the urine of patients comatose from opium, and to whom atropine or belladonna has been given.*

10th. Belladonna is no "antidote" to opium, nor even to the entire series of pathological phenomena determined by that poison. Nor is this surprising, since there are no antidotes to pathological entities which do not indeed exist. But theoretically and practically it does modify some of the phenomena of opium poisoning, and may be used to advantage within the limits of the following rules.

1st. It should not be given as a prophylactic, but only to combat conditions already existing, either of restlessness, nausea and vomiting, or of somnolence, stupor or coma.

2d. It should not be given in large doses, but in small ones [℥ xv] frequently repeated.

3d. It is safe to continue the administration so long as the pupils are not dilated nor the pulse accelerated. If dilatation has taken place, yet the iris remains motionless,—if the pulse has become rapid and weak, and coma still continues unabated,—further use of atropine would only increase the mischief

4th. The use of adjuvants, as emetics, coffee, if necessary, electricity, is to be recommended as much in the belladonna treatment as in any other. The prevision of the physiological effects to be expected from belladonna enable us generally to analyze its influence, even when a complex medication has been employed.

Fibroid Tumor.—Dr. W. Mussey, of Cincinnati, Ohio (*The Clinic*), presented at the Cincinnati Academy of Medicine a fibroid growth which was removed from the left labium of a child aged two and one-half years. The tumor measured five inches in its longest, by three inches in its broadest diameter. The little patient made a very rapid recovery from the operation.

* Traité de Plantes Médicinales.

* This elimination in substance of atropine with the urine is known to be the cause of the dysuria that so frequently attends therapeutical doses.

Reports of Hospitals.

ST. LUKE'S HOSPITAL, N. Y.

NOTES OF PRACTICE AND PECULIARITIES OF TREATMENT.

PNEUMONIA.

THE plan of treatment ordinarily adopted in the treatment of this disease is to give the patients three grains of quinine three times per day, simply for its supporting effect; if the temperature gets up to 104° or 5°, reduce it by rubbing them over with cacao butter, which operates very nicely indeed when used for that purpose, feed them well, and that is about all.

The treatment is simple, but the results are gratifying.

DELIRIUM TREMENS.

Most of these patients, it is said, will require some stimulants. A man was receiving ℥ i. three times a day. Hydrate of chloral, bromide of ammonium and potassium, and other remedies which naturally suggest themselves to the mind of the practitioner, are used if the patient requires anything besides the care and quiet of the hospital to secure sleep.

SCARLATINA.

The remedial measures employed in this affection are in keeping with the generally received doctrine that it belongs to a class of diseases called self-limited; hence all the duty of the physician consists in guiding his patients among the shoals and rocks to which they are exposed during their perilous voyage.

About ℥ i. of cacao butter is used as an unction twice a day to relieve the high temperature, and after this the symptoms are met as they arise. This article of butter of cacao receives a hearty recommendation as an agent to be used for the reduction of the temperature in this class of cases.

ACUTE ARTICULAR RHEUMATISM.

When one of these patients is brought in with joints swollen and tender and painful, and motion about suspended, in short, with all the phenomena of an attack of acute articular rheumatism, he is immediately placed upon a treatment which consists in the administration of iodide of potash in fifteen grain doses every two hours, and sulphate of quinia gr. x. alternately, every two hours.

This is continued until the acute symptoms subside. It is expected that this will take place within fifty-six hours, and is discontinued at the end of this time in case the acute symptoms do not yield. In most cases the acute symptoms are completely subdued within twenty-four or forty-eight hours, and the patients feel comparatively comfortable. This, with a certain sense of propriety, might be regarded as heroic treatment, yet the results sanction and commend its adoption. The local treatment scarcely goes beyond covering the joints with cotton. Later in the treatment colchicum enters, and is regarded as a useful adjuvant to the salts which are ordinarily employed. It is said that the salts do much better when combined with colchicum, than when they are used alone.

NIGHT SWEATS OF PHTHISIS.

A remedy commonly employed for the relief of this symptom is: Fld. Ext. Ergot in drachm doses at night. In some cases the patients vomit the remedy, but it is said to work exceedingly well in a large majority of cases.

Hydrate of chloral, given in grs. xx. doses about two hours before the time for the sweating to commence, is another plan.

Another method suggested is to awaken the patient a little before the hour at which the sweating commences, have him wash himself and take a little lunch.

SPRAINS.

These cases are immediately, as a rule, treated to a plaster of Paris splint, with the precaution taken to pad the limb well with cotton before making the application.

BURNS.

Gunpowder burns are occasionally brought in from among the quarrymen, and the application used for this class of injuries is, bichloride of mercury, one grain to the ounce of water, with the addition of one drachm of tr. benzoin. This is an old prescription here, and is supposed to be especially serviceable in connection with gunpowder burns.

Oxide of zinc ointment has the practical recommendation of an old member of the fire department.

MOSQUITO NETTING AS A SURGICAL DRESSING.

In all those cases where it is desirable to keep up support and pressure, and at the same time permit the free escape of all discharges from the wound, or ulcer, or whatever it may be, the ordinary mosquito netting used for a bandage meets all the indications. Bundling dressings are avoided in this way, the parts are kept cool, the discharge goes on unrestrained, and at the same time support is maintained. If the discharge is considerable, a pad of oakum may be placed beneath the parts to secure the discharge, thus insuring perfect cleanliness. This netting serves an admirable purpose in dressing large abscesses; for instance, when compression and free discharge are to be associated.

REDUCTION OF HIGH TEMPERATURE.

The mean normal temperature of the human body in health is laid down as 98.6° F. Anything above or below this, is to be regarded as suspicious.

When the temperature reaches 105° it is occasion for anxiety, and if associated with delirium or unconsciousness some measures must be taken to reduce it to a point somewhat nearer the normal standard without delay.

For example, a patient suffering from acute articular rheumatism has a sudden elevation of temperature to 105°, 106°, 107°, and falls into a state of unconsciousness, which is commonly the case with this elevation, must have some measures applied to reduce his temperature a number of degrees, or he will soon succumb. In such cases as these demanding active treatment, a tub of ice-cold water is placed by the patient's bed, which contains a couple of sheets. One of these sheets is wrung out and the patient immediately rolled up in it. When the temperature is as high as 105° or 6° it will become hot in a very few minutes, and then it must be changed and the other substituted for it; and this is kept up until the patient commences to complain, which is a very good indication that these measures have been carried sufficiently far. The patient is then wrapped in a dry sheet and placed in bed. This method of treatment is very often employed in this hospital, and there seems to be no other alternative in these severe cases. Unless the temperature is reduced by some means the patients almost invariably die, and this means is regarded as the most practical that can be employed.

In milder cases with less constitutional disturbance, other measures are instituted, such as sponging and the use of cacao butter as already indicated.

"There is no proof that 'cold' brings on diseases," says Wunderlich. "On the other hand, the application

of cold on febrile temperatures has proved it one of the chief antipyretic and antiphlogistic remedies, especially in typhus and exanthematic diseases."

"The benefits accruing from cold applications in fever do not depend simply upon the subtraction of an overplus of heat; the question is more complicated, and much is to be learned yet."

SUB-ACUTE PLEURISY.

Patients who present their credentials and are booked, "effusion into the pleural cavity—large quantity," are tapped at once, and placed upon tonics, quinine, and iron. Diuretics are not used with any great degree of confidence.

When the effusion is moderate tonics alone are used.

BRIGHT'S DISEASE.

The general principles of treatment embrace the administration of tonics and diuretics. The best tonics are, quinine and tr. chloride of iron; the best diuretic is thought to be the infusion of digitalis.

ERYSIPELAS.

For a local application the liq. plumbi et opii is used, and for internal administration quinine and iron, and the quinine is thought to be especially serviceable. It may have been noticed that the administration of quinine and iron in some of the hospitals is not so steadily adhered to as has been wont to be the case with the profession in general. Of their value in this disease it will be difficult to convince the profession, notwithstanding some of the cases which are treated without the administration of these remedies seem to do equally as well as those which receive it.

Progress of Medical Science.

ABSORBING POWER OF THE HUMAN SKIN.—Dr. Thomson, of Edinburgh, gives some experiments which he tried on his own person to ascertain the truth of the statements made as to the curative power of mineral water baths, depending on the absorption by the skin of certain salts and other substances which they hold in solution; and, further, to ascertain whether certain substances applied in the form of ointments, etc., pass through the skin and reach the blood before they produce any beneficial effect. His conclusions are, that not only has absorption by the skin been greatly exaggerated, but in the case of substances in aqueous solution it seems to be the exception, not the rule, for absorption to take place; and that in the case of ointments, etc., some of the substances so applied seem to be absorbed and others not.

THE PHYSIOLOGY OF THE NERVOUS SYSTEM.—The review of "Fournié on the Nervous System," in the last number of *The Journal of Psychological Medicine*, brings out the following arguments: 1st. The possibility of establishing the physiology of the nervous system upon a natural basis. 2d. To determine the nature and functions of the nervous system. 3d. The number and classification of the intrinsic functions and the functions that compose the nervous system. These subjoined facts are noted by Fournié: That the functions of the cerebral powers of relation, the cerebral functions of reproduction and nutrition, represent all the possible transformations produced in the brain in functional movements. That the brain furnishes a power that controls organic life. This he calls "incitation motrice." This "incitation motrice" is the functional product of the brain, and is also given: 1st. To the apparatus of relation. 2d. To the organ of nutrition. 3d. To the organ of reproduction. But at the same time that it gives its produced function the brain does not cease to be a living special organ, that is to say, an organ perceiving and recollecting.

FRACTURE DRESSING.—B. W. Stone, M. D., of the Western Lunatic Asylum, Hopkinsville, Ky. (*Geo. Med. Companion*), advocates the following plan of dressing for fractures for insane patients: After the fragments are brought into apposition, they are secured by two layers of the roller with splints of bookbinders board between (as ordinarily recommended); outside of this dressing is placed a wooden side-splint, deeply hollowed out on the side next to the limb, which is retained in position by straps of tinned iron or sheet iron; these encircle both the limb and splint, and are securely fastened with screws to the latter. The straps should be an inch and a half to three inches in width, and covered with cloth. In fractures of the forearm, of course, precaution should be taken to keep the two bones separate. The splint is also posterior here. This dressing, he remarks, is easily applied, the materials are cheaply obtained, is comfortably worn, and is secure against ordinary accident.

REMOVAL OF THE TONGUE.—E. M. Vassar, M.D., Cahaba, Ala. (*Geo. Med. Companion*), recently witnessed the successful removal of the tongue from a Spaniard, aged 67 years, by Dr. J. T. Gilmore, of Mobile. The operation was performed with Dr. Nott's Rectilineal Ecraseur for cancer of the tongue. Dr. Gilmore has performed this operation three times within the past two years.

CLOSURE OF THE VAGINA BY AN EXTENSIBLE HYMEN.—Dr. I. Galindo, of the city of Mexico, reports the following case: Mrs. N. N——, of nervous temperament and strumous constitution, had been married eight months. She had always enjoyed good health, and menstruated regularly and abundantly. Some months after marriage, she observed a relative scantiness of menstrual discharge; slight giddiness, loss of appetite, and a certain general bad feeling, but, attributing them to the condition of pregnancy, allowed some time to pass. The symptoms and menstrual flow continuing, she consulted a lady friend, who, after an examination, advised her to consult a physician. The physician to whom she applied felt, on introducing the finger, a membrane which, as he says, "without my reaching to the extremity or bottom of it, resisted a little, but yielded to pressure." Withdrawing his finger, the membrane adhered to it like a glove. Examination with a speculum disclosed appearances corresponding with what had been presented to the touch. A mucous membrane was seen identical with that of the vagina, elastic and entirely closed. When the next menstrual period recurred, she again visited the physician, who observed the blood passing like a sort of exudation from the whole mucous surface of the external parts, presenting great drops disseminated over the membrane. The inference was a hymen consisting of a membrane so exceedingly elastic as to permit the entrance of the penis; coition without resistance, without breaking of it, and without impeding the act. Having drawn the membrane, with pincers, outside the vagina, it was punctured with a bistoury, and at once retracted so as to form a hard roll, which offered some resistence to the free passage of the finger. Subsequently a speculum was used several times for the purpose of introducing iodine, and the hardness of the roll disap-

peared. Coition ceased to be painful, and even the use of a speculum did not annoy the patient.

Two or three months later the woman aborted; had an attack of granular metritis, and, recovering, again became pregnant. In due season she was delivered by a normal labor, excepting that owing to the smallness of the vulva the dilatation of it was tedious, and the perineum—as the doctor predicted—was ruptured.—*Observador Medico.*

Double Amputations by Chopart's and Symes' Methods. Successful Skin-Grafting. Threatened Death by Chloroform.—Dr. A. A. Shearer, A. A. Surg. U. S. A., sends us the following interesting cases:—

On Nov. 22d, 1871, William H—— was admitted to the hospital at Fort Wallace, Kansas, with both feet frozen. He had been herding cattle in the bottom of the Arkansas river, and had lost, by one disaster, all his ponies; whereupon he undertook to walk to the Kansas Pacific R. R., seventy miles north, for the purpose of procuring new supplies—an undertaking so hazardous that none who have not crossed the plains in mid-winter can form any estimate of the danger. On the second day out the thermometer suddenly sunk to — 7° and the northwest wind became a gale. Mr. H——, however, kept on against the storm, and with *very* great fortune encountered and shot a stray buffalo, on the afternoon of the third day. Almost dead with cold and thirst, he drank greedily of the blood of the animal, and without doubt this saved his life. Here he threw away his rifle, cut up his blanket and tying the pieces around his freezing feet, pushed on for life. On the evening of the fourth day he was discovered endeavoring to dig a hole in the sand thrown up alongside the railroad track, in which he might find protection against the storm. He had struck the track but twelve miles west of Wallace, to which point he intended to go when he set out.

Eighty head of strong cattle were frozen to death during the storm, in the neighborhood of Wallace, and Doctor Shearer dwells upon the above facts as furnishing an example of the wonderful powers of endurance sometimes displayed by a man whose life is at stake.

The nose, cheeks, ears and hands were badly frozen, but were perfectly restored by the measures employed, viz., the cautious application of ice-water; after which, the following liniment was used:—

R.	Tinct. iodine co.	℥	j.
	Liq. ammoniæ	℥	iss.
	Tinct. arnicæ	℥	iij.
	Ol. ricini	℥	vj.

M.

Applied to frozen parts on soft cloths, twice daily.

Life in the feet was irrevocably gone. The line of demarcation was soon established,—in the left foot, high up over the instep and including a part of the heel; in the right foot it passed just above the tarso-metatarsal articulation, the heel being left intact. Amputation above, and at the joint respectively in the two cases, was decided upon. During the performance of Syme's operation by Asst. Surgeon King, an unavoidable accident occurred in the slipping of the jointed leg of the table. The posterial tibial artery was divided above its separation. This rendered it uncertain whether it would be better to amputate above the joint or not, but the consideration that a second amputation was yet to be undergone decided in favor of completing the operation as begun, and risking the result.

The lower extremities of the malleoli were removed, and the flaps, without redundancy, brought together. Dr. Shearer then immediately operated on the other limb, above the joint; using the circular method. Nothing untoward happened to the second amputation, the wound closing completely by the twelfth day.

Violent erysipelas attacked the right stump on the fourth day, and extending to the hip, affected greatly the strength of the patient, which had already been severely taxed. The heel flap sloughed and came away on the fourteenth day. The end of the stump being covered with firm and healthy granulations, Dr. King resorted to skin-grafting, the portions of skin being taken from the patient's arms, and each about one-eighth to one-half of an inch in diameter. They were secured by isinglass plaster. Three of the grafts adhered; took on a pale blue color at first, as if about to undergo decomposition, while the non-adhering ones retained their color. The stumps healed nicely, and several months afterwards Dr. Shearer met the patient in St. Louis, walking by the aid of a light cane and artificial feet made for him by Dr. Bly, of Rochester. Owing to interference with the parts, the ball-and-socket joint peculiar to Dr. Bly's foot could only be used on the left limb. At the time of the report the patient was following his old occupation in Montana, and sat in his saddle with as much ease, and certainly with more grace than before the occurrence of his misfortune.

John D——, a citizen hunter, was admitted to the same hospital on the 26th of November, 1872, both feet being frozen. The line of demarcation in the right foot extended over the articulation of the astragulus and cuboid, and in the left foot, over the tarso-metatarsal articulation. Syme's method, with Pirigoff's modification, was employed in the amputation of the right foot, and at the completion of the operation the patient was thought to be too weak to undergo, at the time, the second amputation, which was therefore deferred until nine days later, when, his condition warranting it, the patient was again placed on the table. Chloroform was administered as before, when he speedily became pulseless and moribund. Opposite windows were opened to allow of currents of cool air; the poles of a battery were immediately applied over the heart, and artificial respiration resorted to. In a few moments slightly perceptible sighs were apparent, and these finally increased until respiration and consciousness were fully restored. Two tablespoonfuls of brandy at intervals of an hour were given for three hours, when complete anæsthesia was produced with sulphuric ether, and the foot removed by Chopart's operation. The patient rallied from the effects of the ether without a bad symptom, and on the 22d of January one stump had entirely closed, and the other discharged but little. The man will be well able, Dr. Shearer thinks, to pursue his trade—that of shoemaking—the stump admitting the use of the lapstone strap with ease.

Temperature in Uræmic and Puerperal Convulsions.—In a series of observations contributed to *L. Mouvement Médicale*, by Dr. Bourneville, with regard to the range of temperature in convulsions of uræmic origin and those of the puerperal state, the following conclusions are arrived at: 1. At the outset of an attack of uræmic convulsions, a *fall* is noticed in the previously high temperature. In puerperal eclampsia a *rise* takes place. 2. In the course of uræmia a progressive lowering of temperature takes place; whereas in eclampsia the temperature of the patient becomes more and more elevated from the outset of the attack, and that with great rapidity. 3. These differences are intensified at the moment of death—in the one case the tem-

perature falling very rapidly, even below the normal; in the other, reaching sometimes to 43° Cent.

USE OF ARSENIC IN THE TREATMENT OF CONSTIPATION.—M. Isnard recommends arsenic in the treatment of constipation, especially in the case of females. Although any preparation of arsenic seems to answer, M. Isnard prefers, ordinarily, arsenious acid. Three grains being dissolved in two and one-half pints of water, a coffee-spoonful will represent one *milligramme* of the acid. A medium dose is six to ten coffee-spoonfuls daily, in three doses, preferably taken at meal-time, in water or wine, and increased gradually in quantity.—*Le France Méd.*, April 9.

AMPUTATION OF THE ENTIRE UTERUS IN A CASE OF INVERSION.—Dr. Martino Barba, of Naples, reports a case of a woman, twenty-five years old, who suffered a complete inversion of her uterus following the delivery of her second child. Owing to the exhaustion of the patient by almost constant hemorrhage, Dr. Barba removed the uterus by means of an *écraseur* followed by a metallic ligature. The woman recovered and was discharged from the hospital on the twenty-second day after the operation.

This, according to the reporter, makes the sixty-fourth case of ablation of the inverted uterus which has been recorded, forty-four of this number having recovered. A point considered by him worthy of remark is the fact, that the operation by means of the ligature has met with greater success than any of the other modes, the uterus coming away generally by the twentieth or thirtieth day, during which time the free use of disinfectant washes is requisite.—*Le Tribune Médicale*, March 30.

A NEW METHOD OF PERFORMING AMPUTATIONS.—At a surgical *clinique* at La Pitié, Prof. Verneuil advocated the following method of removing limbs, calculated, he thought, to do away with arterial compression, whether by fingers or tourniquet, which is frequently inefficient, and is an exciting cause of phlebitis and sloughing of the integument from pressure, especially in patients who are fat. Flexion of joints, in the cases of the elbow and the knee, will frequently suffice to control hemorrhage when amputations are made below these points; but by the method advocated by Prof. Verneuil, in which the limb is treated as a tumor would be, the hemorrhage is reduced to a minimum. When antero-posterior flaps are formed, a common bistoury is all that is required for incising the soft parts, which are divided in successive layers, the blood-vessels being ligated as they are met with, and before being divided. Veins as well as arteries are closed with ligatures. The bone is divided as in the usual methods. When the principal blood-vessels are so located that they can be included in one of the flaps, it is the practice with the Professor to divide the bone before forming this flap. Twenty-one cases are reported as having been operated on by him in this manner, viz.: Eight disarticulations at the shoulder, three amputations of the thigh, two amputations of the arm, six amputations of the leg, and two coxo-femoral disarticulations. He recommends this method as having the advantages: 1, of enabling the surgeon to operate with fewer assistants; 2, the avoidance of hemorrhage; 3, obviating the risk of phlebitis from the pressure necessary to control hemorrhage.—*Gaz. Méd. de Paris*, March 29.

RENAL DISEASE IN CALCULOUS PATIENTS, AND ITS INFLUENCE ON THE CHOICE OF OPERATION.—*The British Med. Jour.* of March 8, gives an abstract of a clinical lecture by Sir Henry Thompson on this subject. The questions are, he says: If stone in the bladder is complicated by the presence of chronic renal disease, what should be done, when are we justified in operating, and what operation should we choose? Chronic renal disease he considers to be a wide term; and chronic Bright's disease is open to the same objection. First of all, malignant disease may be at once disposed of, since, if this be so advanced that a satisfactory diagnosis is possible, any operation is clearly useless. The two forms of Bright's disease which most concern us are the large, white, smooth kidney, and the granular contracted kidney—the so-called amyloid kidney being rare.

The diagnosis of Bright's disease presents no difficulty, even when complicated by the presence of stone; the low specific gravity of the urine, the presence of casts and of an amount of albumen out of proportion to the amount of pus present, decide the nature of the case at once. Next, there is what is known as the calculous kidney. Men are often met with who are frequently or almost continuously passing crystals of uric acid or small calculi. This never goes on for any length of time without damage to the kidney; on microscopic examination blood will almost always be found in the urine. Such persons are often stout, red-faced, healthy-looking rusties; but if such a man should present himself with a stone in his bladder, and says he has been accustomed to pass gravel for years, Sir Henry advises the surgeon to beware of him, for in spite of his apparent good health he will be unusually liable to severe rigors and urinary fever.

Saccharine diabetes is occasionally associated with stone. Sir Henry says he has met with two such cases, and never had any more troublesome. There was in both cases very great irritability of the bladder and of the system generally. These cases are likely to require all the care and patience the surgeon can muster.

Lastly, there is a dilated condition of the kidney and the ureters, which is due to a long-standing obstruction of the passages. This has sometimes been called "surgical kidney," which Sir Henry thinks a misnomer, since, far from being a surgical kidney, it is the consequence of a neglect of surgical measures, and never would exist if surgical aid had been afforded at the outset of the malady. This condition is most frequently met with in old cases of stricture; also in cases of enlarged prostate, large calculus, long-continued atony of the bladder, etc. Owing, then, to the presence of some obstruction to the escape of urine from the bladder, that organ becomes dilated and hypertrophied, the pressure leads to dilatation of the ureters and the pelvis of the kidneys, the secreting substance is next pressed against the capsule, and finally the whole organ may be distended into a sort of cyst. Sir Henry has seen the ureters as large as the small intestine, and contain, with the pelvis of the kidneys, thirty fluid ounces of water. A calculus by itself never produces this effect unless it is large, and not necessarily even then, since it depends on the amount of obstruction. And now comes an important fact, viz.: that this may occur without any distinct symptoms; we may suspect that this state of things is present, but cannot be absolutely sure. The patient, probably, has some cystitis, and consequently pus in his urine, but there is no more albumen present than the pus would account for; there are no casts; the urine may be of fair specific gravity, and there will even be no deficiency of urea; if there be, the patient will at once show symptoms.

A high authority abroad, he said, had stated that this condition of the kidneys can be diagnosticated by means of palpation; but he could not confirm this assertion, since it would be exceedingly difficult to detect with certainty a soft, movable, and collapsed tube like the ureter, even in a thin person: but generally these persons are in middle life, and stout, also, from confinement. The parts are not sensitive unless suppuration or a renal calculus be present. It is often possible to make a shrewd guess, but even a strong suspicion is not sufficient ground for refusing to relieve a suffering patient.

In considering the extent to which renal disease affects the prognosis of lithotrity, Sir Henry, omitting slight cases, says he has operated on three patients who were suffering with advanced chronic Bright's disease. The first was some years ago. A very pale, weak, and puffy-looking man, with a large phosphatic stone, came to him for an operation and was refused, but begged so hard that Mr. Thompson would do something for him, that the latter admitted him to hospital. After observation for three weeks, the stone was carefully crushed at the eighth sitting, allowing a good interval between them. After a stay of three months in hospital (two months longer than is usually required), the patient went out freed from his trouble, and died of the kidney disease nine months afterwards without any recurrence of the calculus. Following an operation upon a similar case, some time afterwards, the patient had some rigors, but went out at the end of ten weeks cured of the stone. Three months later he presented himself, having still a large amount of albumen in his urine, but no recurrence of the stone. Emboldened by his success, Mr. Thompson attempted a third and worse case. Everything went on well for a time, but after the fifth sitting uræmic symptoms supervened and the patient died.

Sir Henry says he has no knowledge of how many cases of mechanical dilatation of the kidney he may have operated on with success, since he knows of no means of ascertaining such condition during life, but has no doubt that this condition is present in a considerable number of the more severe cases, and instanced three cases complicated by very old and tight stricture. Under such circumstances, his plan is to tie in catheters for a week, or until he can introduce a small lithotrite, continuing the use of the catheters *in situ* until all the fragments are removed. Surgeons have advocated lithotomy in cases of calculus complicated with chronic kidney disease, as avoiding the "teasing" with instruments for several weeks; but Sir Henry is quite certain that lithotomy would certainly have killed any one of the patients above mentioned. Lithotrity was introduced fifty years ago, at which time the statistics of lithotomy were at their best and have since declined, while those of lithotrity are constantly showing better results, and he thinks that there is no doubt, with our present experience, that with a sufficiently friable stone, lithotrity, skilfully performed, is the best operation. The success of this operation is more greatly influenced by previous experience on the part of the operator than in the case of lithotomy, and Sir Henry advises those who undertake the treatment of these cases to prefer lithotomy in doubtful cases, until they have had the chance of gaining experience by crushing two or three *small* calculi.

Influence of Vapor of Ammonia in Preventing Poisoning by Fumes of Mercury.—M. Claude Bernard presented at a meeting of the Academy des Sciences, held March 16, the following facts, for M. Meyer, viz.: In shops where mercury is used in the manufacture of mirrors, it has been discovered, by accident, that the effects of this metal upon the health of the workmen can be prevented by sprinkling half a pint of the aqua ammonia of commerce upon the floor of the shop after the work of the day is ended. This course has been pursued in the manufactory of mirrors at Chauny, in France, since 1868, and the workmen have not only been thereby protected from the influence of mercurial fumes, but old workmen who had been the subjects of mercurial tremors have had their health improved. The *modus operandi* is not yet accounted for.—*Gaz. Méd. de Paris*, No. 14.

Treatment of Pyelitis by the Inhalation of Oleum Pini Ætherium.—Professor Dittel, of Vienna, has for some time past employed inhalation of oleum pini ætherium (obtained from the cones of several indigenous species of pine), with great success in cases of pyelitis. Even after the first few inhalations the characteristic smell of violets can be detected in the urine, and at the same time the pain and constantly distressing inclination to micturate cease, the amount of sediment in the urine diminishes, and soon both ease and sleep return to the patient. Inhalations are, however, only useful in cases of uncomplicated pyelitis which have not been too long neglected. In cases where there is any complication (more especially nephritis), the inhalations should only be continued so long as the inclination to micturate lessens, and the absolute quantity of sediment in the urine diminishes. Should fever be set up, and should inflammatory symptoms increase, further inhalation will only do mischief. At first the inhalations consume five minutes, and are repeated only twice daily. Should no contra-indicating head symptoms appear, the number may be increased to three or four. The cold balsamic oil is employed.—Correspondence of the *Irish Hosp. Gaz.*, April 15.

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THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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

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ENDOWMENT OF MEDICAL INSTITUTIONS.

Few outside of our own profession realize that medicine is earning for itself a position among the positive sciences. Yet it is constantly making progress by the discovery and application of new facts within its own domain, and is always testing the results of all scientific investigations to see what practical bearing they may have on either the detection or the relief of disease. It is in this way that the study of optics has been the means of supplying us with the ophthalmoscope and the microscope, and in proportion as these instruments have enlarged the range of our observation we have gained in our power of diagnosis. With such improved appliances we are constantly adding to the known forms of disease or bettering our classification of old forms; and with new aids at our command and more thorough study, it is likely that we shall accomplish still greater results in the future.

We are all aware, too, that the studies in the purely scientific branches of medicine have added largely to our present knowledge. When it was observed that blood-corpuscles pass through the walls of the vessels, an important era was reached in Physiology. We were at once furnished with an explanation of many difficult questions that had long perplexed us, and scientific researches received an impulse that led to the discovery of other valuable facts of a similar nature.

Pathology, too, has won for itself recent laurels. The labors of Virchow are now recognized the world over. His classification of new growths has given to pathological researches a definiteness and accuracy that is almost mathematical. He has furnished us with a scheme by which we may decide upon the character of any tumor from the relation of its minute anatomical elements. When the clinical history is established by the collection of a sufficient number of cases, we shall have a most valuable addition to our present means of diagnosis.

Much has been done, too, in other experimental branches. Many important facts have been discovered in Pharmacology by testing the influence of drugs on the lower animals. It is well known that in some of these animals the action of reagents is quite similar to that in man. Most of the facts relating to the antagonism between poisons have been obtained in this way, and the advantages or disadvantages of certain remedies have been demonstrated pretty clearly. In fact, there is a prevailing tendency at present to rely on the observation of facts, and discard theories and speculations, and we are appreciating more thoroughly that valuable conclusions can only be reached by patient and persevering study. It is well known that Bischoff spent ten years of his life in investigating the segmentation of the egg; and Agassiz in commenting on his devotion and assiduity, said, "It is one thing to theorize about what Nature does, and another to know by virtue of patient and intense study what she really does."

Many, however, are apt to think that these investigations require comparatively small outlay, and are open to most of us. It is said that Faraday commenced his experimental labors in the kitchen. Yet it would have been impossible for him to have made his great discoveries in electricity and magnetism without ample means at his disposal, and we should hardly expect to accomplish as good results as have been reached by similar experimentalists without equal facilities. In fact, we know that Faraday had ample means at his disposal during the most active years of his life. If such studies are to be successfully prosecuted in this country, we must provide for them out of our liberality. We must not forget, too, that the labor imposed upon the instructors in such departments is engrossing and the responsibility heavy. We readily can see how incompatible such work must be with the daily routine of the practising physician. The Physiologist finds his time fully occupied if he devote himself simply to his own branch and such others as throw light upon it. So in investigating those pathological changes in the body that constitute disease, the student must have facilities for his study and for such collateral ones as minute anatomy and chemistry.

How can progress be made in Pathological Anatomy without a sacrifice of time and expenditure of material that are obviously impossible for the ordinary physician? We do not wish to underrate the value of clinical teaching. Its importance is plain, but the status of a clinical teacher is very different from that of a purely scientific one. The nature of the work that will fit the one for his post is exactly what is necessary to fit him for a high position in the community as a successful practitioner, while on the other hand success in purely scientific medicine leads to professional distinction,

but brings with it little or no pecuniary emolument. It is hardly to be expected that we shall ever see the time when these departments are self-supporting. They are quite different in this respect from our ordinary scientific schools, which fit young men for positions where they get a remuneration that bears some proportion to their proficiency. The purely scientific medical studies can hardly be remunerative in the ordinary sense of the word, but they will return us many fold the outlay, for if we are provided with the means of getting a higher education, we shall certainly make better physicians. But there is no doubt that they are necessary to our progress at this time, and should claim our support. We need for them funds to sustain them in permanent and active operation, so as to place their advantages within the reach of the student of ordinary means.

A good deal is said about the advantages of free colleges and free tuition, and it has been a popular opinion that if education were free to all, the standard would be vastly improved. Yet in this country we know that such institutions have never reached as high a degree of excellence as those that have required regular fees for attendance. Instruction in many branches of medicine does, undoubtedly, return a moderate income, and here we have no wish to see any change made; and, indeed, if at any time the requirements for graduation in our schools should be made more severe, we should be glad to know that additional fees were demanded for the additional studies.

There is another feature about most of our professional schools that is peculiar and makes them incomparable with the schools of foreign countries. Here they are mostly in the hands of private corporations, and are independent of the State or National Government. The success which they have attained, however, is a proof that private individuals are eminently capable of managing their affairs. It is highly probable that their growth would not have been as rapid and vigorous under State or National management. With the frequent changes in political power it is always likely that the original plan may be forgotten or altered at the caprice of legislators. An example of this kind has been furnished by a medical college in one of our Western cities. If support is to be given to our institutions it should come from the alumni and the public at large. None more than medical men will appreciate the advantages which the pursuit of the higher studies will give to medical schools. We should feel that there is no good reason why our facilities for instruction in this country should not be as good as in any other. The demands made upon us by the community are as exacting as they are in any part of the civilized globe, and we should be able to fill these requirements, by supplying to our students the best possible medical training. The graduates of our colleges must be looked to for active co-operation in this work. From them must emanate whatever good is to be accomplished. If they lend themselves heartily to such undertakings, by contributing their money or influence, a great deal may be done. If they are unable to give largely themselves, they can at least interest others who are ready and glad to give to any good cause.

If this subject is properly laid before the community, they will not fail to see that there is a close connection between our growth and prosperity as a nation and the sound education of our medical men, and that money given to promote such objects is as much needed as for the establishment of hospitals and other charitable institutions.

TRANSACTIONS OF THE STATE MEDICAL SOCIETY.

The Legislature of New York have failed to make an appropriation for the publication of the Transactions of the Medical Society of the State of New York. This is not so alarming a circumstance as would at first appear. The Society will now be forced to publish its Transactions at its own expense, and will doubtless take a pride in having them appear in a creditable form. We are convinced that the more independent this organization can be of legislative patronage, the better for its influence upon the profession of the State and the dignity of medicine in general.

EDUCATION OF THE PEOPLE ON MEDICAL TOPICS.

As an evidence that the leading men are ready and willing, in the face of old prejudices, to appreciate the signs of the times, by endeavoring to educate the people on medical topics, we refer with pleasure to the brilliant success of the addresses of Dr. J. Marion Sims, and Profs. R. O. Doremus and Frank H. Hamilton on Anæsthesia, recently delivered at Steinway Hall. The subject was an interesting one in any event, but was made doubly so by the masterly manner in which it was handled by the distinguished gentlemen in question.

In times gone by, any attempt to deliver such discourses in public would have subjected the perpetrators to discipline before some Committee of Ethics. Now, however, the sentiments of the profession are so much in favor of these addresses, that they are willing to encourage them in every possible way. The good which public scientific lectures accomplish is certainly enough to warrant their continuance. The people require education on medical subjects, and if the regularly educated medical man is willing to leave the field to quacks, the profession as a whole must abide by the consequences. We believe in the education of the people, and are willing to second every effort in that direction.

The Widow of the late Valentine Mott died in New York June 2, in the 77th year of her age.

Dr. Robert Loughran, of Kingston, N. Y. has been chosen President of the Ulster Co. Medical Society for the ensuing year.

Reviews and Notices of Books.

THE PRACTICE OF SURGERY. By THOS. BRYANT, F.R.C.S., Surgeon to Guy's Hospital. With five hundred and seven illustrations. Philadelphia: Henry C. Lea. 1873.

MR. BRYANT has long been known to the reading portion of the profession as an able, clear, and graphic writer upon surgical subjects. The volume before us is eminently one on the practice of surgery, and not one which treats at length on surgical pathology, though the views that are entertained upon this subject are sufficiently interspersed through the work for all practical purposes.

The extended experience of the author in the wards of Guy's Hospital as well as in private practice, and the views he entertains upon the diseases of which he treats, are concisely and pleasantly given, at the same time the opinions of others are duly respected, and quotations from their writings freely given.

The work cannot be regarded, as may be the case with many surgical text-books, as a mere compilation of the views of others, with very little original matter on the part of the compiler, for it contains more that is original than the majority of text-books which we have had the opportunity to examine within the past few months.

The chapters upon Repair and Inflammation, Traumatic Fever, Septicæmia, and Pyæmia are carefully and well written upon, while the one which treats of Tetanus, especially in regard to its treatment, is perhaps more full and modern than is contained in any text-book of its size.

On the other hand, injuries and diseases of the nerves have too little space given them. Great improvement could be made in this department if the investigations of Weir Mitchell, Morehouse, and Keene were referred to. In the treatment of Curvature of the Spine Mr. Bryant has but little faith in the various mechanical contrivances as *curative agents*; but in referring to various apparatus which must be used in conducting our treatment of these cases, the wants of the student are not properly consulted in referring to them merely by the name of the inventor. Plates of these should have been given, and directions as to how they are applied.

His chapter upon the Surgery of the Chest, especially that part which relates to wounds, is open to criticism. It hardly does the author justice. Under the head of treatment of wounds of the lung, we object to the advice given to administer antimony in half-drachm doses of the wine every three or four hours, when the pulse is rapid and respiration is increased; nor in gunshot wounds to resort to venesection, if the "lungs are engorged." Mr. Bryant quotes Dr. Macleod on this subject in saying, "that the cases of gunshot wounds of the chest that did the best in the Crimea, were those in which early and repeated bleedings were had recourse to." We believe it was Dr. Fraser who made a strong protest against this very plan of treatment, as he had observed it practised during the war in the Crimea, which caused army surgeons to abandon this pernicious practice. The results obtained in the treatment of these wounds during our late war, as exhibited in Circular No. 6 of the Surgeon-General's office, would show that venesection is uncalled for.

Aneurisms generally are well described, though with by no means the care and comprehensiveness as is seen in Mr. Erichsen's work.

Skin-grafting receives a full and interesting chapter; but due credit is not given to our own townsman, Dr. Frank H. Hamilton, in this department. We believe that Dr. H. first brought this method of closing wounds and ulcers to the notice of the profession. He first suggested it to a patient in 1847, and made the first operation on January 21st, 1854.

On the subject of diseases of the bladder our author thinks that ulceration is rarely the result of ordinary cystitis, but is due "to the frequent introduction of the catheter in the paralyzed organs, and in cases of stone." In severe forms of cystitis and ulceration, he says it is a question "whether an incision into the bladder, as for lithotomy, would not be sound practice." That this is not only sound practice, but the most judicious mode of dealing with these cases, has been fully shown by Drs. Parker, Emmet, and others of this city.

While treating of the subject of fractures of the thigh, in reference to extension and counter-extension, we are told Dr. Buck's method has "the disadvantage of not preserving sufficient immobility of the broken bones, and ought, therefore, only to be employed in conjunction with the long splint." This certainly is not in accordance with the experience of our hospital surgeons, who, we are willing to say, will show as good if not better results from the use of simple extension, as Mr. Bryant will with his long splint, with or without the addition of extension by weights.

While calling in question a few of the statements made in this book, we cannot close the notice of this excellent work without referring in terms of high praise to the chapters upon injuries of the abdomen and its viscera; the subjects of Hernia, Diseases of the Bones and Joints, as well as those of the Reproductive Organs, and affections of the Rectum.

The illustrations, which are freely scattered through the book, are in the main entirely new, taken as they are from the specimens in the museum of Guy's Hospital, and, from their character as well as in their execution tend to make the book a very attractive one.

As a text-book we cheerfully recommend it, feeling convinced that, from the subject-matter, and the concise and true way Mr. Bryant deals with his subject, it will prove a formidable rival among the numerous surgical text-books which are now offered to the student.

CLUB-FOOT: Its Causes, Pathology, and Treatment. Being the Essay to which the Jacksonian Prize for 1864, given by the Royal College of Surgeons, was awarded. By William Adams, F.R.C.S., Surgeon to the Great Northern Hospital, and to the National Hospital for the Paralyzed and Epileptic; Consulting Surgeon to the Orthopædic Hospital; late Surgeon to the Royal Orthopædic Hospital; formerly Demonstrator of Morbid Anatomy at St. Thomas' Hospital. With one hundred and six wood engravings, and six lithograph plates. Second Edition. Philadelphia: Lindsay & Blakiston. 1873.

THOUGH this work is essentially the same as the first edition, it bears the character of careful revision and many additions, especially in the chapter on the reparative process of human nucleus. Some of the plates illustrating this are from the author's special work on the subject, while others are entirely new.

The views of Mr. Adams are well known to those of the profession who are called upon to heal the deformities of which this work speaks. The views as to the pathology and treatment are in the main those that are adopted by the majority of surgeons. We fear, however, that Mr. Adams is too much wedded to tenotomy to speak without bias in reference to the treatment of these deformities by means of rubber bands. The remarks upon this latter mode of dealing with these deformities, or, as it is known now, as "Barwell's

method," as found in the second chapter of this book, appear to us to be uncalled for, and certainly the remarks in reference to Mr. Barwell are too personal, not to say in very bad taste.

With reference to the rate of extension after tenotomy, we think Mr. Adams' remarks, "that immediately a tension appears to have been the system recognized by many surgeons in Scotland and America," is partially correct with reference to American surgeons; but only in certain cases, and more chiefly when the foot is at once put up in gutta-percha splints, is the plaster bandage. When the shoe of scarpa, or some one of its modifications, is used, the rule at present in vogue on this side of the Atlantic is to allow an interval of a few days between tenotomy and the use of the shoe to elapse.

Certainly this work is written in a clear and interesting style, and by a thorough master in this department of surgery. It is a work not only valuable to the specialist, but should be read by every practitioner who has anything to do with cases of club-foot.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE COUNTY OF ALBANY, N. Y. 1851–1870. VOL. 2d. PP. 519.

THIS handsomely bound volume, edited by James S. Bailey, M.D., the indefatigable Secretary of this time-honored society, is a fitting companion to the first volume, which was edited by the late Dr. Sylvester Willard, in 1851. In it may be found *in extenso* the minutes of the Society from June 10th, 1851, up to and including June 14th, 1870, and full biographical notices of the following deceased members:—Drs. Wm. Bay, Wm. F. Carter, Mason F. Cogswell, Ira M. De Lamater, Alden March, Jas. E. Pomfret, Wm. C. Rodgers, Howard Townsend, Alfred Wands, Leonard G. Warren, Sylvester D. Willard, etc.

Since its organization, 324 members have been connected with the Society; of these, 93 have died; 7 resigned; 3 embraced homœopathy; and one was expelled. The average age of 78 of the deceased members was 52.70 years. Since 1870, semi-monthly meetings have been regularly held, which, with the preceding meetings, exhibit interesting and profitable papers and discussions, deserving a careful perusal. To the surviving members of the society the work will be specially interesting and attractive.

THE SCIENCE AND ART OF SURGERY; BEING A TREATISE ON SURGICAL INJURIES, DISEASES AND OPERATIONS. By JOHN ERIC ERICHSEN, Senior Surgeon to University College Hospital, and Holme Professor of Clinical Surgery in University College, London. A new edition, enlarged and carefully revised by the author. Illustrated by upwards of seven hundred engravings on wood. Philadelphia: Henry C. Lea. 1873.

THIS well-known work, which has been so well received as a text-book among the profession in this country, is again presented to the student and practitioner in a new form, and after a careful revision at the hands of the author. The present edition, which we believe is the sixth that the work has passed through, is issued by the publisher in two large octavo volumes of over sixteen hundred pages.

Besides considerable additional matter, many of the chapters have been re-arranged, and portions of them rewritten, and many new illustrations have been added.

Mr. Erichsen's work is too well known to require any extended notice, and having passed through so many editions, a critical review is uncalled for.

Among the many changes and additions which we now notice, we would cite the following:—

Under the head of anæsthetics a long paragraph has been given upon the bichloride of methylene.

The chapter on amputations and inarticulations has been re-arranged, and more material in the way of statistics given.

Inflammation is treated of more concisely, and the views of German pathologists properly noticed.

We regret, however, that under the head of Process of Repair, the union of wounds is treated of after the old views, rather than in accordance with the researches of Billroth and others of his school; yet while speaking of the union of fractured bones these investigators have not been forgotten.

Plaster-of-Paris dressings are referred to more *in extenso* than in previous editions, and we are pleased to find, under the head of fractures, the injuries that may follow to the nerves in these accidents are very fully set forth.

The views of Dr. Bigelow, in connection with the various dislocations of the hip, receive the attention they most assuredly merit, and here, as elsewhere through the book, American surgeons are more and more noticed. The chapter on injuries of the head, which has always been a most excellent one, is farther enriched by a paragraph upon the effects of cerebral injury on the mental powers.

Additions have also been made to the subject of injuries of the face and adjacent parts, and under this head we are gratified to see so much that is new in a general work on surgery like this, in matters relating to injuries of the eye.

Impairment of vision from spinal injury is entirely new. Two pages are given to this important subject. It would have been more appropriate, however, it appears to us, if this new matter had been found in the previous chapter upon injuries of the spine, rather than in the one devoted to injuries of the face.

To nervous diseases have been added material upon traumatic paralysis, and additions to the pathology and treatment of tetanus. Under the latter head the use of the calabar bean is mentioned, but in Mr. Erichsen's hands it has produced no appreciable good effects. We regret that no mention is made of the hydrate of chloral.

The chapter on the diseases of lymphatics and glands has been enlarged by remarks upon lymphadenoma and elephantiasis of the legs and scrotum. To the latter subject is given a table showing the results of the ligature to the femoral and external iliac arteries, in the treatment of that affection.

The whole subject of arteries has been rewritten, and is now more in accordance with advanced views than heretofore.

Chapters 43, 44, and 45, upon aneurisms and the ligation of arteries, which perhaps has been considered as the most valuable of the work, is now rendered still more so from the many valuable additions it has received, both as regards the various modes of treatment, and in the increase of statistics in the tables showing the results of the ligature when applied to the more important vessels.

These are but a few of the more important changes which are noticeable in these two handsome volumes. The whole work bears strong evidence of a careful revision, and a determination on the part of its eminent author to keep the work up in the many advances that are constantly occurring in the art and science of surgery, and maintain its high position among not only text-books, but those of reference in this department.

A System of Oral Surgery; Being a Consideration of the Diseases and Surgery of the Mouth, Jaws, and associate parts. By James E. Garretson, M.D., DD.S., Oral Surgeon to the Medical Department of the University of Pennsylvania. Phila.: J. B. Lippincott & Co. 1873. 8vo, pp. 1075.

The author of this work has succeeded in presenting to the gentlemen of the dental profession an exhaustive treatise on the subject of oral surgery. For accurate description, skilful arrangement, and thoroughness of detail it has no equal. As a text-book for the mechanical and surgical dentist it is invaluable. The large number of illustrations add not a little to the value of the work in avoiding lengthy descriptions of the various operations which the professional dentist is so constantly called upon to perform.

The Prevention and Cure of Disease; a Practical Treatise on the Nursery and Home Treatment of the Sick, &c. By Geo. H. Napheys, A.M., M.D. Springfield: W. G. Holland. 1872. 8vo, pp. 1137.

This work is professedly calculated for the non-professional reader, and will serve a good purpose. It is well written, and the suggestions thrown out and the advice given show an appreciation of the wants of such as may feel their need of being enlightened on many subjects connected with the ordinary care of the sick.

Questions on Anatomy, for the Use of Students. By Corydon L. Ford, M.D., Prof. of Anatomy in the University of Michigan.

This little volume of 136 pages forms a most excellent adjuvant in the study of anatomy. The object of the author is clearly expressed in the language of his introduction, when he says: "It is no part of my design to supersede the use of books, but on the contrary to secure the most profitable use of some good text-book in and of lecture-room instruction."

The questions partake of the author's conciseness and brilliancy in anatomical instruction. In the chapter which the author has headed "Matters pertaining to Histology," questions are introduced which not only concern histology but physiology, and the partnership thus formed is not altogether undesirable. This book may be very serviceable to students, and not unprofitable to practitioners, for two reasons: First, the questions in general are concise and well placed. Second, they give "occasion for definite answers to definite questions on practical subjects."

The Mechanism of the Ossicles of the Ear and Membrana Tympani. By H. Helmholtz, Professor of Physiology in the University of Berlin, Prussia. Translated from the German with the author's permission, by Albert H. Buck and Norman Smith, of New York.

The translators of this little monograph have done an important work in bringing before the profession a treatise, which in their own words is "the only one in any language which enters fully into the anatomical, physiological, and mathematical aspects of the question." Their work has been well done, particularly when we consider that the style of Professor Helmholtz is very condensed, and his writings are, to a foreigner, exceedingly difficult to understand.

The faults are but few in number, and might perhaps better be called indelicacies.

The work is divided into eight chapters or sections, and a great deal of space is given to the discussion of the anatomy and physiology of the middle ear. The expression "shades of vibration" has been used several times throughout the work, though it might be more correct to use the word "degrees" instead of "shades."

The *first* section is devoted to a discussion of the "results due to the small dimensions of the auditory apparatus," and on the 10th page the words "centres of excitement" had better be changed to "centres of excitation." On the 11th page, in the second footnote, the word "departure" is not a good one, and "deviation" would be better. On the 15th page, in speaking of the enormous *height* of tones, it would be smoother to substitute the expression "high degree" for "height."

The *second* section gives the anatomy of the membrana tympani, and is very carefully and clearly written. In the third paragraph on the 19th page, the second sentence is badly translated, for the possessive pronoun "its" is made to refer to the Rivinian recess, whereas it should refer to the membrana tympani. On the 20th page, in speaking of the shape of the membrana tympani, Helmholtz uses the word funnel, which seems to us too strong a term, as it is nothing more than a concavity. In the last paragraph on this same page, Helmholtz mentions an important fact, but rarely stated by other authors, viz.: that the membrana tympani owes its property of reflecting light to the fat which it contains.

In the last line of the second paragraph on the 21st page, the word "process" should be translated "spine."

The *third* section discusses the "Attachments of the Hammer," and its translation has been particularly well done. In the first line from the bottom, on the 24th page, and in the first line on the 25th page, the words "to" and "down" are superfluous, and the sentences read more smoothly without them. On the 32d page, the words "restraining band" had better be substituted for "band of restraint."

The *fourth* section tells of the attachment of the anvil, and here the translators have met with more difficulty, for there are quite a number of passages in the original which are somewhat complex. Still, it reads quite smoothly, and is much plainer than the German.

The *fifth* section describes the "movements of the Stirrup." In the first paragraph the word "anvil" has been used when the stirrup was intended. In the second paragraph the word "cotyles" is a little singular, and we think "sockets" would have been better. In this section the word "calibration" has been used several times, and apparently coined for the purpose. It would be difficult to find an exact translation of the German "calibrirung," and calibration does as well perhaps as any other.

The *sixth* section is devoted to a description of the "concerted (or better, combined) action of the bones of the ear," and is a particularly interesting one, as it contains an account of Helmholtz's own experiments. The accuracy of observation of the great scientist, and his delicate manner of manipulation, are here thoroughly manifested.

In the *seventh* section, the "Mechanism of the Membrana Tympani" is described, and here we trench upon the region of the higher mathematics. On the 54th page, in the last paragraph, the word "curve" should be "arc." Helmholtz here mentions the method of Politzer for proving that the excursion of the parts of the membrana tympani, situated between the handle of the hammer and the border of attachment, is considerably greater than that of the manubrium itself, by introducing a manometer into the external meatus. He also describes his own method of testing the acoustic action of curved membranes, for which he has invented a very simple and ingenious apparatus. He closes the monograph in the *eighth* section by a

mathematical appendix, which has particular reference to the mechanism of curved membranes, which perhaps may be of thrilling interest to any one fond of the integral calculus.

To all persons who are interested in otology and real scientific work, this little volume is well worth having.

ILLUSTRATIONS OF THE INFLUENCE OF THE MIND UPON THE BODY. By DANIEL HACK TUKE, M.D., M.R.C.P. Philadelphia: Henry C. Lea. 1873.

THE scope of this interesting work is exactly defined in the introductory chapter. "The mind acts upon the body through its three-fold states of intellect, emotion, volition. . . . . Physiologically considered, the illustrations range over the effects produced by the action of the vesicular nerves of the encephalic centres upon the sensory and motor ganglia, the centre of the sympathetic, and through the outgoing nerves upon the whole body. . . . . The cases brought together in this volume will illustrate the truth, that the mind or brain excites, perverts, or depresses the sensory, motor, vaso-motor, and trophic nerves, and through them causes changes in sensation, muscular contraction, nutrition, and secretion."

The demonstration of the dependence of all modes of psychical existence upon the nervous system, and the close connection of all parts of the nervous system with one another, gives us already the logical *à priori* basis for this proposition. On this account the practical proof afforded by the rich collection of illustrations presented by the author, is all the more interesting. It has long been shown, by the phenomena of the hallucinations of the insane, that the production of sensations may depend on a modification of sensory ganglia from within, as well as on the reception of impressions from without. The chapters on the influence of the intellect and emotions upon sensations, have almost taken for their text the assertion of John Hunter: "I am confident I can fix my attention to any part until I have sensation in that part." The influence of our mental conditions on organic functions and nutrition is of more importance than this as a basis for therapeutics, in other than purely hysterical affections, and the text of these chapters might justly be found in the sentence of Charcot: "Nothing is better established in pathology than the existence of trophical disturbance consecutive to lesions of the nerves or nervous centres." And numerous cases in Dr. Tuke's book show a precise analogy between the physical effects of an irritative thought or emotion, and an anatomically demonstrable lesion of the spinal cord or nerve centre other than the cerebral hemispheres.

CLINICAL LECTURE ON DISEASES PECULIAR TO WOMEN. By LOMBE ATTHILL, M.D. Univ. Dublin, Examiner in Midwifery, King's and Queen's College, Vice-President Dublin Obst. Society, &c., &c. Second Edition, revised and enlarged. Philadelphia, Oct. 1872. Lindsay & Blakiston. Duod., pp. 241

IT is long since we have had occasion to notice a work representing the Dublin School of Gynecology, distinguished of yore by such names as Montgomery, McClintock, and Churchill, and very worthily represented by this volume.

The first edition was published in Oct., 1871, and this second follows in less than a year, a fact which sufficiently attests the local appreciation of the work, and the author.

The book comprises fifteen clinical lectures upon the following subjects, viz.:—Instruments and manipulations, leucorrhœa, amenorrhœa, dysmenorrhœa, menorrhagia; (2), polypus, fibroid tumors, ovarian tumors; (3), inflammation of cervix, chronic inflammation of cervix, displacements, enlargements, and cancer.

In the preface to the first edition the author says: "I do not lay claim to originality in the views put forward in these lectures. I have simply endeavored in my practice to keep pace with the recent advances which have been made in the medical and surgical treatment of such cases, and I have not advocated any treatment the efficiency of which I have not thoroughly tested."

In the preface to the second edition he adds: "Keeping prominently in view the concise and practical character proposed, I have endeavored to render them as comprehensive as possible, aiming especially to express myself in the simplest and least ambiguous language."

It is not too much to say that the author has succeeded admirably in this undertaking. Perhaps because we are not again confronted with the anatomy, histology, pathology, and bibliography of the subject, so largely common to most authors, this volume, notwithstanding the disclaimer of the preface, has an air of independence and originality.

The first chapter, on leucorrhœa, clearly divides the forms due to the separate localities which give rise to the discharge—vagina, cervix and body of the uterus, and gives the physical characters which will determine the source.

To the treatment of acute vaginitis it contributes strong statements as to the value of infusion of tobacco, not commonly used among us, while it does not seem sufficiently to endorse the strong solution of nitrate of silver, so much and so successfully used here.

The recommendation of fuming nitric acid in cervical leucorrhœa we believe to be correct, and also the appreciation of depletion by the puncturator where a tumid and soft cervix reveal an attendant congestion of the whole neck.

There are good and timely words about self-abuse as the latent cause of some forms of uterine disease which baffle our best care.

Amenorrhœa is traced to its causes in defective development of the various generative organs, or the occlusion of their canals; or diathetic conditions, as phthisis, chlorosis, and plethora. The galvanic intra-uterine stem and the induced current appear in Dublin, as here, to be oftenest employed in the treatment of infantile uterus, and the fallacy of stimulating emmenagogues to be equally appreciated.

The chapter on dysmenorrhœa makes issue with those who believe it almost uniformly dependent upon permanent mechanical causes, as flexions and stricture, and while the frequent presence of these is admitted, strongly insists upon a congestive, neuralgic, and rheumatoid variety.

The necessity of enlarging the cervical canal being conceded, the author abjures all metallic dilators, prefers the laminaria to the sponge-tent, and employs the uretrotome somewhat less freely than most recent writers.

Meno- and metro-rrhagia are discussed as symptoms dependent upon debility, the lymphatic temperament, climacteric congestion, cardiac-hepatic or renal obstruction, subinvolution, and inversion of the uterus, fibroids, and cancer. In the treatment of the villous and granular conditions of the endometrium we find a method somewhat peculiar to the Dublin school—heroic in its appearance, but commended earnestly by the author after much experience of its value, as efficient, and, with proper care, innocent.

It consists in the application to the entire internal surface of the fuming nitric acid. To employ this method he dilates the cervix largely, using six or eight tents of laminaria at once, and then applies the acid on the cotton-wrapped probe with the intent of producing a shallow eschar upon all the surfaces touched. This proceeding at first strikes us as severe, but those who have observed the remarkable immunity from inconvenient symptoms which attends the use of this acid in the rectum, will not be disposed to reject the statements of the author.

In common with most gynæcologists, Dr. Atthill rejects the medicinal treatment of fibroids as nugatory, and practises upon the submucous and interstitial varieties avulsion, enucleation, and gouging aided by the hypodermic injection of ergotine. The treatment of polypus offers no novelties.

In flexions and displacements, Dr. Atthill employs the stem-pessaries for anterior, and the closed-lever of Hodges modified by Greenhalgh, in posterior curvature and prolapse! but in almost all cases treats the attendant congestion by repeated sanguineous and serous depletion, by puncturator and glycerine pledget.

The last work of Grailly Hewitt, recently noticed in these columns, assumes change of place or of axis as the primary and fundamental idea of uterine pathology.

Some ignore everything but congestion, others exaggerate interstitial hypertrophy. Atthill seems committed to no one idea, a pathologist without prejudice, an operator without a hobby. It is for this reason that we commend the book as a manual for students. The style is simple, forcible, and clear, the type and paper very good.

We do not like the duodecimo form, it is inconvenient, since almost all medical books are in octavo, and tends to the dispersion of kindred books on our shelves.

Wohler's Outlines of Organic Chemistry. By Rudolph Fittig, Ph.D., Nat. Sc.D., Professor of Chemistry, University of Tubingen. Henry C. Lea, Philadelphia. 1873. Pp. 522.

This text-book, long recognized in Germany as the leading work on this subject, and as well adapted to the use of beginners as those farther advanced, is brought to the notice of Americans through the translation of it by Ira Remsen, M.D., Ph.D., Prof. of Chemistry and Physics in Williams College, Mass, who has spent several years in Germany in perfecting himself in chemical science. To make the text of the author clear to the simplest inquirer, the translator has prefixed an introductory chapter on the "Constitution of Chemical Compounds"—an important adjunct, considering the obscurity of many of the new terms employed by the author.

As a guide to Organic Chemistry—the strict division of Chemistry into Inorganic and Organic having long passed away—its connection with instruction, and as a reference and aid in laboratory work, Prof. Wohler's Outlines are all that could be desired.

Prof. Fittig has, in this edition, entirely re-written portions of the work on account of the rapid advances in chemistry made since 1868, the date of the previous edition. More than formerly has the system of selecting the hydrocarbons been carried out, viz.: in the consideration of all the other groups of bodies, etc. The book is clearly printed on tinted paper, and being in convenient form, will be undoubtedly sought after by students and chemists who wish to know the essentials in Organic Chemistry up to the present time.

Reports of Societies.

MEDICAL LIBRARY AND JOURNAL ASSOCIATION OF NEW YORK.

Stated Reunion, held March 7th, 1873.

PLASTIC EXUDATION WITHIN THE PLEURA.

Dr. John C. Peters, President, in the Chair.

Dr. James R. Leaming read a paper on "Plastic Exudation within the Pleura—Dry Pleurisy," being the substance of his paper read at the recent meeting of the New York State Medical Society.

He showed that crackling and submucous râles are of pleural origin; that plastic exudations may be absorbed without medicine; and that fly-blistering, long continuance in close and confined air, and dosing with drugs are injurious. From twenty to forty grains of calomel, however, are useful in plastic exudations, the remedy acting as a sedative. It should be given in one dose, and not to be repeated. In some cases, to hasten absorption, the alkalies and muriate of ammonia can be employed.

In studying the etiology of pulmonary tuberculosis, plastic exudation has been too often lost sight of. He thought it was a common cause of that disease, and two-thirds of patients affected with pulmonary tuberculosis can date its commencement with the plastic exudation, to one-third who cannot; in short, plastic exudation, crippling the lung, has a powerful influence in hastening tuberculosis. Four cases were related showing the depressing tendency of plastic exudation in the lung, which were under the care of Dr. Sprague. The remedies should be antiphlogistic, tonic, and sustaining.

Dr. H. M. Sprague, of Fordham, had no doubt of the truth of Dr. Leaming's proposition, and remarked that in ninety-nine cases out of a hundred sub-crepitant râles were certainly friction murmurs, as frequently shown in autopsies. Pleurisy is a very frequent cause of phthisis, and in nine cases out of ten where one lung is affected, there will be a true friction sound of plastic pleurisy at the base of the other lung.

Dr. F. N. Otis had seen cases which corroborated the views of the speaker, which had been very interesting to him. He mentioned a case which he saw with Dr. Purdy in which the plastic exudation râle was discovered.

Dr. Peaslee stated that this point, brought out at the Academy three or four years ago by the author of the paper, would have been of immense value to him ten or fifteen years ago, when he paid more attention to the subject than at the present time. He thought that the profession were obliged to say that in the immense majority of deaths from phthisis, pleuritic inflammation must have existed. He had no reason to suppose that tubercle produced inflammation any more than pus; but inflammation could produce tubercle.

Dr. O'Sullivan said that objections could be made to the views advanced, if there was time, and an important one was the limited number of cases yet presented for their substantiation. He had resorted to counter-irritation, combined with tonics, with good effect. In regard to bronchial affections, so common in our climate, they had a serious tendency towards deposit.

The President remarked that Dr. Leaming's view was in part a favorite one of Dr. Swett, and related a

case which occurred as long ago as 1856. It made a strong impression upon him at that time, but he had departed from it. It was rare to find cases of pneumonia without attending pleurisy.

The following donation was made to the Library by Dr. Seguin: A copy each of the "Manual of Thermometry," and "The Thermometer in the Family."

The Association then adjourned.

Stated Reunion, March 14, 1873.

Dr. John C. Peters, President, in the Chair.

The President announced that Dr. Arnold had compiled nearly all of the collections of papers read before the Association since 1866, and hoped the missing ones would be handed in soon, by their authors, to complete the set.

TREATMENT OF WHOOPING-COUGH WITH QUININE.

Dr. B. F. Dawson then read a paper on "The Treatment of Whooping-Cough with Quinine," of which we give a summary.

Dr. Dawson referred, in opening, to this mode of treating pertussis as first advocated by Professor Rinz, of the University of Bonn, in 1870, through the columns of the May issue of the *American Journal of Obstetrics*. This author had shown that quinine had accomplished valuable results in his cases of the affection, which he considered to be a neurosis of the pneumogastric nerve, caused by infectious and irritating mucus that has accumulated in the pharynx and larynx; and having found by experiments that quinine destroyed, even when highly diluted, all structures found in normal mucus, he supposed that the mucus of pertussis also would be affected in a similar manner by quinine. In this he was not disappointed, the trial equalling his expectations.

The author mentioned the fungus theory of Dr. Letzerich, of Germany, also Dr. Breidenbach's mode of treatment, namely, the efficacy of the hydrochlorate of quinine—in doses of from 1¼ to 15¾ grains. He thought that with such strong testimony in favor of the quinine treatment of pertussis, it was somewhat surprising that nothing, or very little, had been done in this country to test its value.

Having opportunities for testing the value of anything new in infantile therapeutics, this mode of treatment was applied in 19 cases occurring in dispensary and private practice, and of these, 9 were selected as the most striking in their results. Out of the 19 cases the shortest cure was effected in one day, and the longest, a single case, in twenty; the next longest being twelve days. In but two cases was he disappointed in the efficacy of the quinine. They were two dispensary cases, and the failure was attributed to the negligence of those in charge of them, the quinine not being given to them as frequently as ordered. There was, however, in both these cases some palliation of the paroxysms.

In regard to the administration of so disagreeable a remedy, he found that, though frequently there was some difficulty in getting the children to take it, yet it was exceptional for them to resist after the first two or three doses, and in only a very few did it cause vomiting. The direction to give the children a piece of an orange or a little sugar five or six minutes after taking the quinine, doubtless had considerable to do with their seeming willingness to take the "bitter medicine." For his own part, he accepts the fungus theory of Dr. Letzerich as the correct explanation of pertussis, and in consequence considers it an affection of the mucous membrane of the pharynx and larynx, and the "whooping" as simply reflex; and the fact that almost all remedies given for other than their local effects, have either signally failed or but partially succeeded, he thinks strengthens this hypothesis.

Nevertheless, he does not attribute the rapid cure effected by quinine to the simple destruction of the fungus, but also to its nauseating, bitter taste. In every case of pertussis there is an abnormal secretion of a thick tenacious mucus from the mucous membrane of the pharynx (whether this secretion is due to simple catarrhal or reflex hyperæmia, or to fungoid development, it matters not), which may or may not excite a paroxysm of whooping, but which certainly aggravates and prolongs the latter, as may be proved by the fact that the paroxysms invariably cease the moment this mucus is removed either by the coughing, vomiting, or the finger. The effect of a small amount of a solution of quinine, when taken into the mouth and swallowed, is instantly, from its bitter and nauseating taste, to excite a free secretion of thin mucus from the buccal mucous membrane and the salivary glands, and thus softening, render easy of dislodgment the tenacious mucus referred to. The frequent repetition of the quinine, therefore, keeps up this free secretion, and thus prevents the mucus from becoming tenacious and difficult of dislodgment. At each act of coughing the accumulated mucus is readily loosened and expectorated, and unobstructed inspiration obtained. The rapid loosening of the cough, the briefness of the attacks in comparison with those previous to the administration of quinine, and the easy expectoration, tend to favor, he believes, the correctness of the above theory.

In closing, the speaker felt convinced that if the following rules are carefully observed, few if any will be disappointed in their results:

1st. Give the quinine—sulphate or hydrochlorate—dissolved by acid in pure water only. For children under three years, from 5 to 8 grains, and for older children and adults, from 10 to 12 grains to the ounce.

2d. Give not less than a teaspoonful *every single*, or at the longest, every two hours during the day, and whenever cough comes on in the night.

3d. Give nothing afterward for some minutes to destroy the taste or to wash out the mouth.

4. Continue giving it notwithstanding the first doses may be vomited.

5th. Be sure that the quinine is pure and thoroughly dissolved.

In the foregoing paper the author wished to be understood as advocating the value of quinine in curing the "whooping" chiefly, the cough in some of the cases lasting for some time after the whooping ceased, and which required the usual treatment for bronchial catarrh.

Dr. J. B. Reynolds, in opening the discussion, referred to the 70 or 80 cases of the affection which were reported five or six years since, in which benzoin was used with advantage, and then spoke of four recent cases placed under the influence of quinine. In two cases the remedy was given imperfectly, and in the remaining he thought there was a marked improvement, although his limited experience would cause him to hesitate before recommending it to the profession. We gave it in doses of from one to one and a half grains to the drachm of water, every hour.

Dr. P. B. Porter, in two cases reported by Dr. Dawson, coming under his observation, confirmed its value. The results were *very* good. In his own practice he was using chloral quite extensively, and for that reason had not adopted the quinine treatment yet.

Dr. F. P. Foster had had no experience with quinine, but could not believe that it was a fungoid

disease or a catarrh. His belief was that pertussis is a nervous disease. Other remedies, nitric acid for example, had achieved as good results—if taken as regularly as the quinine had been given by the author of the paper. If one large dose of belladonna, as advocated by Trousseau, was effective, he could not understand why quinine should be given frequently.

Dr. Dawson doubted the existence of a true whoop in the new-born infant.

Dr. Foster referred to authors like Watson, who confirm its existence in the infant soon after birth.

Dr. Mary C. Putnam, from an extensive reading of the theories of Binz and others, and actual computation, had found that to produce an action in the adult one hundred and twenty grains of quinine would be required. It seemed to the speaker that this enormous amount would interfere much with the explanation of its therapeutical action. That quinine may have a sedative action on the medulla could be theoretically accepted. The mode of administration recommended by the author seemed to be unobjectionable.

The Dr. inquired whether chocolate drops could be given without disadvantage just after the administration of quinine.

Dr. Dawson remarked that an interval of three or four minutes should elapse from its ministration.

Dr. Reynolds called attention to the use of quinine, in minute doses, in hay-asthma, which had been recommended by a German author—namely, one part to 750 of water thrown freely into the throat and nose in the form of spray. Dr. Sands had spoken confidently of this procedure, but where he had tried it the agent proved unsuccessful.

Dr. Hanks related his experience in giving quinine in pertussis, but never in solution. It was given in coffee, with an equal part of powdered glycyrrhiza; but he had abandoned it. As the affection was so often complicated with catarrh, pneumonia, and other diseases, it should be taken in account, when reference is made to the mode of treatment. In uncomplicated cases he he had cured it in three days with the following combination: One drop of belladonna, 14 grains of bromide of ammonium, in a teaspoonful of wild-cherry bark.

Dr. Leaming stated that a solution of nitrous acid, quinine, and iron was very efficacious, given every three or four hours, in small doses. It was a systemic disease, and might be a neuroses, although not proven. It resembled other systemic diseases, and was referable to the ganglionic system. He spoke of an epidemic, occurring in an institution under his charge, where an emulsion of castor-oil combined with belladonna was very useful in 40 cases of children. In some of these cases complicated with scarlet fever, after the latter had run its course, the cough again returned.

Dr. Janvrin had used quinine only in a few cases, and then in conjunction with his favorite remedies, hydrocyanic acid and belladonna. He thought the remedy was a beneficial adjunct. In regard to hay-fever, and its treatment with the spray-producer, he could not recommend it, as in his experience it had no effect.

The President cited Virchow as an authority for the administration of large doses of quinine in hay-fever.

As pertussis was an infectious and contagious disease, practitioners must bear in mind, that disinfectants were important agents in cutting it short. The chloride and sulphate of soda were of great service. The tenacious mucus was to be overcome by alkalies—the cough being loosened by these remedies. The old mixture of potash and cochineal had stood the test of time. He then spoke of spasm of the glottis, and said that many, like Dr. Frank Smith, preferred to narcotize their patients enough to keep them drowsy. Aconinum has great paralyzing influences on the muscular system; it is to be preferred to other remedies. The extract can now be relied on. He has seen the disease subside in two or three days under the use of prussic acid. All the astringents, such as tannin, acetate of lead, oxide of zinc, and alum are advocated; the acetate of lead could be particularly recommended for neutralizing the mucus. The tonic remedies have only until recently been used in old, broken down cases.

Dr. Jerome C. Smith confessed, after using during the past nineteen years all the remedies, that he did not treat pertussis better now than when he first started in practice. The first remedy used by him was asafœtida. He would be pleased to see such favorable results in his practice with quinine, as had been narrated by Dr. Dawson, and should use it at the first opportunity.

Dr. Reynolds had used asafœtida and all other remedies with the exception of chloral. As a general rule, he gives iron to build up the blood, and then, where there are no complications, invariably sends them out of doors; his experience shows that patients cough less out of doors than in the house. They should be well fed.

Dr. Dawson inquired if, in his three cases, he did not get better results with quinine than from anything else.

Dr. Reynolds thought that as good results were obtained by benzoin, as the character of the disease changes constantly. This season children affected were more restless than usual, and the bronchitis is more than ordinarily marked.

The Association then adjourned.

Correspondence.

MEDICAL SOCIETY OF HUDSON CO., N. J.

To the Editor of the Medical Record.

Sir:—Under the head of Medical Items and News, published in your number of April 15, 1873, you report that at the regular meeting of the District Medical Society, County of Hudson, New Jersey, held at the Court-House, April 1, 1873, an election was held to fill vacancies, and that a President, Vice-President, Treasurer and Reporter were elected to fill such vacancies.

I will first call your attention to the fact that in your issue of Feb. 15 was published a correct list of the officers of the Society elected at the annual meeting, held Dec. 3d, 1872; since then no vacancies have occurred in the Society, except that the Secretary elected at the annual meeting, was deposed at the regular meeting, held May 6; and again, the District Medical Society, County of Hudson, did not hold its meeting at the Court-House on April 1, but convened on that day at St. Mary's Hospital, Hoboken, where the regular session of the Society was held.

An attempt was made to create a division in the District Society and to gain a representation in the Medical Society of New Jersey; but the State Society, which adjourned yesterday, recognized only the offi-

cers and delegates elected at the annual meeting of the County Society, held in Dec. last.

You will oblige the District Medical Society by making the necessary correction.

Yours truly,

M. A. Miller, M.D.,
President Dist. Med. Soc., County of Hudson.

Jersey City, N. J., May 29, 1873.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from May 5, 1873, to June 4, 1873.

Milhau, J. J., Surgeon.—Relieved from duty in Department of the South and assigned to duty as Post Surgeon at Fort Columbus, N. Y. H. S. O. 94, A. G. O., May 7, 1873.

Smith, A. K., Surgeon.—When relieved by Assistant Surgeon Lippincott, to comply with orders from War Department. S. O. 86, Department of the South, May 2, 1873.

Alden, C. H., Surgeon.—When relieved by Assistant Surgeon White to avail himself of the leave of absence granted in S. O. 56, C. S., A. G. O. S. O. 52, Department of the Lakes, May 6, 1873.

Fryer, B. E., Assistant Surgeon.—When relieved by Assistant Surgeon Moffatt, to comply with orders from War Department. S. O. 65, Department of the Missouri, April 30, 1873.

Weeds, J. F., Surgeon.—When relieved by Assistant Surgeon Caldwell, to comply with orders from War Department. S. O. 86, C. S., Department of the South.

Knickerbocker, B., Assistant Surgeon.—Relieved from duty in Department of the South, and to report in person to the Commanding General Department of the Columbia, for assigment to duty. S. O. 94, C. S., A. G. O.

Phillips, H. J., Assistant Surgeon.—To report in person for duty to the Commanding Officer of the Modoc Expedition. S. O. 51, Department of the Columbia, May 2, 1873.

Caldwell, D. G., Assistant Surgeon.—Assigned to duty at Nashville, Tenn. S. O. 86, C. S., Department of the South.

Lippincott, H., Assistant Surgeon.—Assigned to duty at McPherson Barracks, Atlanta, Ga. S. O. 86, C. S., Department of the South.

White, R. H., Assistant Surgeon.—Assigned to duty at Fort Porter, N. Y. S. O. 52, C. S., Department of the Lakes.

Wilson, W. J., Assistant Surgeon.—Granted leave of absence for thirty days on Surgeon's certificate of disability. S. O. 66, Department of the Missouri, May 3, 1873.

Moffatt, P., Assistant Surgeon.—Assigned to temporary duty at Fort Union, N. M. S. O. 65, C. S., Department of the Missouri.

King, J. H. T., Assistant Surgeon.—Assigned to duty at Fort Brady, Mich. S. O. 53, Department of the Lakes, May 9, 1873.

Ewen, C., Assistant Surgeon.—Granted leave of absence for thirty days. S. O. 78, Department of the Platt, May 12, 1873.

Irwin, B. J. D., Surgeon.—Granted leave of absence for twenty days. S. O. 72, Department of the Missouri, May 14, 1873.

Fryer, B. E., Surgeon.—When relieved by Assistant Surgeon Moffatt, to comply with orders received from War Department. S. O. 42, District of New Mexico, May 15, 1873.

Frantz, J. H., Surgeon.—Granted leave of absence for 60 days. S. O. 27, Military Division of the South, May 20, 1873.

Weeds, J. F., Surgeon.—Assigned to duty as Post Surgeon at Fort Randall, D. T. S. O. 103, Department of Dakota, May 17, 1873.

Hartsuff, A., Assistant Surgeon.—Relieved from duty in Department of the Lakes, and assigned to duty in Department of the Platte. S. O. 105, A. G. O., May 26, 1873.

Greenleaf, Chas. R., Assistant Surgeon.—When relieved by Assistant Surgeon Huntington, to comply with orders received from War Department. S. O. 60, Department of the Columbia, May 23, 1873.

Knickerbocker, B., Assistant Surgeon.—When relieved by Assistant Surgeon Cronkhite, to comply with orders received from War Department. S. O. 96, Department of the South, May 17, 1873.

Middleton, J. V. D., Assistant Surgeon.—Assigned to duty as Post Surgeon at Fort Bufort, D. T. S. O. 107, Department of Dakota, May 22, 1873.

Huntington, D. L., Assistant Surgeon.—Assigned to duty as Post Surgeon at Fort Lapwoe, Idaho Ty. S. O. 60, C. S., Department of the Columbia.

Brewer, Jno. W., Assistant Surgeon.—To report to Commanding General, Department of the East, for assignment to duty. S. O. 110, A. G. O., June 2, 1873.

Cronkhite, H. M., Assistant Surgeon.—Assigned to duty at Oglethorpe Barracks, Savannah, Ga. S. O. 96, C. S., Department of the South.

Heizmann, C. L., Assistant Surgeon.—Assigned to duty with the Expedition for the reconnoissance of North-Western Wyoming. S. O. 80, Department of the Platte, May 15, 1873.

Moffatt, P., Assistant Surgeon.—Assigned to temporary duty at Fort Union, N. M. S. O. 42, C. S., District of New Mexico.

Styer, Chas., Assistant Surgeon.—Assigned to duty as Post Surgeon at Chattanooga, Tenn. S. O. 102, Department of the South, May 27, 1873.

Yeomans, A. A., Assistant Surgeon.—Relieved from duty in Department of the East, and assigned to duty in Department of Missouri. S. O. 105, C. S., A. G. O.

An Aged Maid of Honor.—Madame Melgueil, one of Queen Marie Antoinette's maids of honor, who accompanied her unfortunate friend to the foot of the scaffold, has just died at the age of 102 years.

Medical Society of the County of Kings.—Officers for 1873:—*President:* Wm. Henry Thayer.* *Vice-President:* Benj. A. Segur. *Secretary:* Richard M. Wyckoff.* *Assistant Secretary:* Audley Haslett.* *Treasurer:* J. S. Prout.* *Librarian:* William W. Reese.* *Censors:* S. G. Armor,* J. H. H. Burge,* C. H. Gibberson,* H. G. Newton,* E. R. Squibb. *Orator:* Alexander Hutchins. *Alternate Orator:* J. H. Raymond.

Medical Items and News.

Dr. Charles S. Bull, late of this city, has removed to St. Louis, Mo.

The London Practitioner has been enlarged by the addition of a department on Public Health.

The British Medical Association holds its next annual meeting in London during the first week of August.

New York Academy of Medicine, June 19, Dr. R. J. O'Sullivan will read a paper on the Hygiene of Primary Schools.

Foster.—Dr. S. Conant Foster, late of New York City, died in Nassau, N. P., April 18, 1873, in the 56th year of his age.

The Public Baths of New York were opened June 1st, for the season. Why not have more than two of these bathing establishments?

Puerperal Fever has been so prevalent in New York of late as to compel certain of our practitioners to send their patients out of town to be confined.

Royal College of Physicians, London.—Dr. Burrows has been re-elected President of the College—an office which he has filled for the last four years.

Physician to the Sultan.—Dr. Mary L. Wadsworth, a graduate of Mount Holyoke Seminary, and a former practitioner in Springfield, Mass, is now family physician to the Sultan of Turkey.

Medical Department, University of New York.—Professor Charles L. Ives, of Yale College, has been elected to fill the chair of Diseases of the Mind and Nervous System, in the Medical Department of the University of the City of New York.

Dr. W. M. Chamberlain, of New York, and Dr. J. Solis Cohen, of Philadelphia, members of the Record Staff, will be absent in Europe during the present summer. We are happy to state that our readers will hear from them from time to time on medical topics.

Dr. R. W. Taylor read a paper before the Public Health Association, Thursday, June 12th, 1873, on *Syphilitic Contagion communicated in the Rite of Circumcision.* This paper is based upon the observation of a series of cases of syphilis in children from circumcision, which were brought to the notice of the Board of Health of this City.

Propagation of Puerperal Fever.—Within the past few days we have been reading a brochure by the late Prof. Joseph M. Smith upon this subject, with so much profit that we would commend the same course to our readers. It is more than ordinarily interesting in view of the prevalence of puerperal fever at this time in our midst. The brochure in question first appeared as an original article in the *New York Journal of Medicine*, Sept. 1857.

Josiah Clark Nott, M.D., whose death we have previously noticed, was a son of Abraham Nott, a distinguished judge of South Carolina, and was born in Columbia, S. C., 31st March, 1804. He received a collegiate education and graduated in arts at South Carolina College in 1824, and in medicine at the University of Pennsylvania in 1827, having defended a thesis on "Costiveness."

Immediately after graduating he was appointed demonstrator of anatomy under Dr. Physic, who was then professor of anatomy in the University. For two years he discharged the duties of the appointment, when his health failing, and showing indications of pulmonary tuberculosis, he removed South to the place of his birth. In 1835 he visited Europe, and on his return in 1837, settled in the practice of medicine at Mobile, Ala. Here he became distinguished in the departments of both medicine and surgery. In 1857 he was appointed Professor of Anatomy in the medical department of the University of Louisiana, and subsequently to the chair of Surgery in the Medical College of Alabama.

His literary labor in the various departments of science, and particularly in medicine and ethnology, has immortalized his name. He contributed largely to the medical periodicals of the day; and from his pen the following works have been published:—

In 1844, "The Natural History of the Caucasian and Negro Races."

In 1849, "The Connection between the Biblical and Physical History of Man."

In 1850, "The Physical History of the Jewish Race."

In 1854, "The Types of Mankind;" and in 1857, "The Indigenous Races of the Earth." The last two works in connection with George R. Glidden and others.

In 1866, "Contributions to Bone and Nerve Surgery." This last book was mainly the result of his personal observations in the late war.

In 1868 he came to this city to reside; and in 1871, became a fellow of this Academy. Last spring he was seized with hæmoptysis, which compelled him to leave the city; last November he removed to Mobile, hoping to obtain relief from the pulmonary trouble which finally closed his earthly career on the 31st of March last. Of his professional labors among us there are those present who can speak better than myself. S. S. P.

The following resolutions were presented by a committee of the New York Obstetrical Society, appointed at the meeting subsequent to the death of Dr. J. C. Nott:

Whereas, It has pleased Almighty God of His infinite wisdom to remove from our midst our late fellow and former President, Dr. Josiah C. Nott; therefore, be it

Resolved, That, while we bow in submission to His will, we feel that in the death of our late beloved associate we have sustained a loss rendered irreparable by his rare professional and scholastic acquirements, his genial and fascinating social qualities, and his simple, honest nature.

Resolved, That, by his valuable contributions to the profession which he loved and honored, Dr. Nott had rendered himself a member of whom we may all feel proud, and whose loss the science of medicine may well deplore.

Resolved, That, in his relations with and conduct towards his professional brethren, illustrated by a long and active career, he has left us an example worthy of imitation.

Resolved, That we tender to his bereaved family our most sincere and heartfelt sympathy in their sorrow.

Resolved, That a copy of these resolutions be sent to his family, and be published in the medical journals of this country.

Signed: J. Marion Sims, M.D.
T. Gaillard Thomas, M.D.
Thos. Addis Emmet, M.D.

Chas. S. Ward, M.D. *Secretary, N. Y. O. S.*

Jenner.—Sir William Jenner has been elected President of the London Pathological Society.

Medical Department of Life Insurance.

LONGEVITY;

OR, THE RELATIVE VIABILITY OF THE SEXES: PARTICULARLY WITH REGARD TO THE RELATIVE LIABILITY TO THE INHERITANCE OF CERTAIN TRANSMITTED DISEASES,—CONSIDERED IN RELATION TO THE SELECTION OF LIFE INSURANCE RISKS, WITH A VIEW OF EXHIBITING THE UNJUSTNESS OF THE PRACTICE OF CHARGING HIGHER RATES FOR WOMEN. ILLUSTRATED, IN PART, BY THE STATISTICS OF PHILADELPHIA, FOR THE ELEVEN YEARS ENDING 1871.*

By JOHN STOCKTON HOUGH, M.D.

Part I.

"Feminæ præ Viris Longevieres."†

From all time and in all ages, physicians, physiologists, and philosophers have declared that woman is but undeveloped man, *not less perfect* than the man *as woman*, but less perfect in a developmental or evolutionary point of view, taking man as the type of the race; or even taking an intermediate (hermaphroditic) sexual organization as the type, in a purely physical aspect, the woman is as far below it as the man is above it. All the latest discoveries and experiments, added to what has hitherto been accepted as true, fully confirm this opinion, which is associated with the names of Aristotle, Humboldt, Harvey, Walther, Wagner, Kessler, Tiedeman, and innumerable other high authorities in all parts of the world, notwithstanding the assertions and allegations of a few uninformed erratic Agrippæan philosophers to the contrary.

By the man being more highly developed than the woman, we mean that his organs are more highly developed, more elaborated, the tissues more attenuated, more thoroughly evolved from an embryonal condition, while the woman retains in a greater degree the embryonal and infantile rotundity, softness, texture, flexibility, elasticity, size, weight, stature, chemical composition and physical constitution of her organs, tissues, and fluids. Want of space and time forbid elaborate details of explanation and proof of this position.

To epitomize the female life, we may say:—She is conceived from an egg less mature (less highly developed); she is extruded after a shorter period of gestation, by a shorter and more easy labor, reaches puberty from one to three years sooner, reaches maturity five years earlier than the man. Though she surpasses man in the rapidity of her development, is subjected to the dangers incident to childbirth, yet notwithstanding this she has a greater viability than man, or is, in other words, longer-lived than he is from the moment of her conception, at the time of her birth,‡ and at other ages. She has a greater tenacity of life, does not succumb to certain deleterious influences so easily as man. It is well known that mares endure hardships, fatigue, wear longer and better than horses, or even geldings; they are "tougher," as the horsemen say. Horses "founder" more frequently than mares—just as men have gout more frequently than women.

"Cavalry officers in the late war found out the wisdom of selecting mares for arduous services; and we all know what a miserably dull animal the unsexed ox becomes." *

As "hunger is a want less imperious in woman" than in man, she will not starve so soon as man. One-fifth less aliment is required for women than for men, as observed in hospitals and prisons.

Maux† has remarked, in dioecious plants, that the females resist injuries better than males; and Mr. Meehan‡ has observed that female plants are less affected by frost than males. This is the more surprising from the fact, as shown by Girou,§ that the fibrous system prevails in male plants, and the vascular in females. In the animal kingdom Burdach‖ has pointed out the predominance of the vascular system in males and the glandular system in females.

Whether the man is *naturally* (in a state of nature) longer-lived than the woman is a question which it is very difficult to decide. I am inclined to believe that *originally*, and in a non-civilized state, men exceeded women in length of years; but, by the nature of their sphere of action in the social compact, by the greater anxiety and mental strain incident to their avocations, by being at the head of the family, by engaging in more hazardous pursuits, by being led into more vices, dissipations and debaucheries than women, by their greater participation in the physical and physiological effects of degeneration in the race, they are in reality shorter-lived than women.•

"At the commencement of the division (of sexes), the female will be first provided for; and in the great struggle for life, all other things being equal, the chances are greatly in her favor. . . . In *vitality*, if by that we may understand the ability to endure circumstances tending to destroy life, he is below her." * *

It would seem, if we followed out the analogy in the greater rapidity of the development of the woman at the various epochs mentioned, that she ought to grow old sooner,†† and indeed die at an earlier age than the man. Though there is some difference of opinion as to the relative longevity of man and woman, yet most good authorities claim that women have a greater longevity than men. It is alleged by most authors, and is indeed proverbial, that marriage lengthens life, but none have explained how or why it does so by any physiological process. I would venture to suggest, therefore, that during each pregnancy the woman *ceases developing*, though she may grow, and as a consequence loses nine months at each pregnancy; and as women have on an average four or five children, they lose from three to five years' development during their pregnancies and lactation. If they do not develop during lactation, it is safe to say that they lose at least eight years, in which, were they not pregnant

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* The writer, in the course of this article, has enunciated theories, some of which are novel and original, and while he fully believes them to be true, he desires it to be distinctly understood that they are not *necessarily* recognized by scientists generally, and further, the scope of this article gives him no opportunity to prove his position, which he hopes to do at some future time.

† Acta Medic. Berol. Dec. 1, vol. viii., p. 91. Dec. 11, vol. x., p. 59. Cited in Plouquet's Literatura Medica, v. 2, Art. Longevitas.

‡ Dr. *J. M. Toner*, in calling attention to one of his diagrams, says it "shows a fact that I am unable to assign any satisfactory reason for; that is, the great excess of male over female deaths under 1 year, and indeed during the entire infantile period under 5 years. According to this showing, the excess of male deaths under 1 year is more than treble the proportion of the excess of male births reported in the United States." "Facts of Vital Statistics in the United States." Washington, 1872, p. 1.

* *Thomas Meehan*, "Old and New." Boston, February, 1872, p. 173.

† *Sprengel*, Neue Entdeckungen, t. iii., p. 350.

‡ Proceed. Amer. Assoc. for Adv. of Sci.

§ Annales des Sci. Nat., et De la Generation, Paris, 1828.

‖ Physiologie, v. ii.

• The fact, as maintained by some, that female fetuses sap the vitality of the mother more than males, may have some influence on their higher degree of VITALITY; this will be treated in a subsequent paper on "The Cause of Rotation of the Sexes."

* * *Thomas Meehan*, "Old and New," February, 1872, p. 17.

†† "According to Pliny (Hist. Nat., B. vii. c. 4 (5), female children are matured more quickly than males, and become old sooner. 'Fœminas gigni celerius quam mares.' Harduin interprets the phrase, 'Crescere pertici, vigere, adolescere.' Cuvier translates it, 'Les filles sont parvenues moins longtemps par leur mere; the daughters are carried a shorter time by their mothers.'" Bostock's Physiology.

or nursing, they would be growing physically as well as really old.

Aristotle says, "They (females) grow old more rapidly, above all if, as we have already remarked, they have many children." *

Dr. Wilks, of Guy's Hospital, in the *Lancet* for January, 1869 (?), calls attention to the fact that a severe diarrhœa may check the growth of the finger-nails, which is indicated by a furrow in the nail, caused by arrest of the nutritive process. So it would *seem* as if the occasional presence of certain morbid conditions was instrumental in lengthening life.

All farmers and stock-raisers know very well that if a heifer become pregnant before she is mature, *i. e.*, about three years old, particularly if it be before the second year is reached, she not only ceases development during gestation, but the possibility of future growth and development is forever after impaired, if not made impossible, though pregnancy may not occur again; such a heifer is said to be "stunted" not only in growth but in development, and retains in size and appearance a greater resemblance to her condition as a calf than she would had she not brought forth until the third year. Whether this premature pregnancy has been observed to lengthen life, I have not been able to learn.

"There are no cultivators who ignore the fact that young females cease to increase after they have given birth to young; and that suckling is still more prejudicial than gestation to their increase in size." †

"It should be emphatically stated," says Dr. Smith, "that child-bearing is not a disease, nor does it less n the 'expectation' of life; on the other hand, life is extended by the effects of pregnancy and child-birth.

"In that relation (marriage), women, on an average, outlive men; and widows live to be older than widowers." ‡

On the whole, then, child-bearing lengthens life, despite the few deaths incident to parturition.

Dr. Casper, after comparing the relative viability of men and women at different ages in the married state, with the unmarried of both sexes, concludes that "le mariage exercise une action favorable encore plus marquée sur la vie de l'homme que sur celle de la femme." §

"Celibacy is more injurious to the woman than to the man; it frequently occasions amenorrhœa, scirrhus, cancer, and a death more premature; in convent-life there are more unhealthy women than men. Fecundation and pregnancy act as fortifiers in the woman, and the mothers of numerous children are in general the most healthy, and live the longest; the sterile woman is more unhappy than the childless man."

The man is shorter-lived than the woman, ¶ notwithstanding the dangers incident to her sexual life, which are peculiar to her, some of them even being without an analogue in the man. Her dangers are greater at the epoch of puberty, during pregnancy, parturition, accouchement, and the extinction of the procreative faculty. The male deer is ** shorter-lived than the female. The females of the pinecrons and the entomostracea are longer-lived than the males. The female bee lives for several years, while the male perishes within a year of his birth.

The woman only acquires the full enjoyment of her force after marriage and pregnancy; it is before marriage that the man has more vigor.*

According to Quetelet † the viability of males and females is about the same on the approach of puberty, or about the 13th year. From this point to about the 18th year the mortality of the woman is the greater. After being equal at the 18th year, the mortality of the man rapidly increases until the 25th year, when it is at its maximum. Then it rises with equal rapidity to the 28th year, when both sexes are again equal. From the 28th to the 50th year the mortality of the woman is considerably greater than that of the man. After the 50th year they both appear to be the same.

This last statement would seem to be directly opposed to the facts as set forth in another part of this paper, wherein the author shows that women have in general after the 5th year a higher viability than men. There are certainly, in this country, more females than males attaining the ages from 60 to 100 years, and the mortality of females from conditions incident to child-bearing is probably counterbalanced by the excess of males in the mortality from intemperance, suicide, murder, injuries, and in the army.

"Carus ‡ remarks that the male fœtuses are oftener the subjects of asphyxia when they come into the world than females, and that they experience more pain and are more difficult to raise from a state of apparent death. Cyanosis is much more rare in the woman than in the man, hemoptysis also presents less danger in her, and leads less frequently to pulmonary phthisis." § Yet the lungs are larger both absolutely and relatively in man than in woman.

M. Alph. Devergie, in his able paper on "Asphyxie par charbon," ‖ says, in 1834–35 there were 360 cases of asphyxia by carbonaceous gases, and among this number 19 cases were of two persons together (man and woman). There were only three examples among these 19 cases, of which one of the two persons were restored to life, and they were all women. The proportion of women saved is much more considerable than that of men. Of 184 cases occurring in 1835, 18 women were saved out of 73, or ¼, and only 19 out of 83 men, or about ⅕.

Some persons might argue from the above fact that the woman was physically stronger than the man, but this is evidently not the case, as everybody knows that time and time again two persons of the same sex, one sick, the other well, have been sleeping in a room filled with the gases arising from the partial combustion of carbon, when the well one was fatally poisoned and the feeble sick one escaped. The true explanation of the matter is, that the more highly developed or healthy person requires more oxygen, and is more sensible to the influence of noxious gases.

In England (1857), according to Dr. Farr's "Life-table for Females," to 100,000 men living, of the age of 20 and under 21, there were 813 deaths annually; to 100,000 females living, 841 deaths annually, or 1 in 123 men and 1 in 119 women of that age die annually. And of men of the age of 20 and upwards, 1 in 39.99 dies annually; of women of the age of 20 and upwards, 1 in 40.65 dies annually; the mean after-lifetime of these are 39.99 years for men, and 40.65 years for women.

"At the present time, among all the people of England, including the poor as well as the favored classes,

* Hist. Anim., B. vii, iii, 3.

† *Giron de Buzareingues*, Mémoire sur les rapports de volume des deux sexes dans le regne animal. Annales des Sci. Naturelles. Tom. xix, p. 362, 1830.

‡ *J. V. C. Smith*, M.D. "Prize Essay on the Physical Indications of Longevity," N. Y., 1869.

§ De l'influence du mariage sur la durée de la vie Humaine, trad. de l'allemand, in Annales D'Hygiene Pub., &c., 1835, p. 250.

Burdach, Physiologie, vol. i, p. 277.

¶ *Burdach*, vol. i, pp. 325 and 366.

** *Bechstein*, Gemeinnuetzige Naturgesch, t. 1, p. 463.

* *Burdach*, Physiologie, vol. i, p. 366.

† See his Courbe indiquant les degrés de Viabilité de l'homme aux différens âges. In Recherches sur la Reproduct., Mortalité, etc.

‡ Lehrbuch der Gynæcologie, t. 1, p. 43.

§ *Burdach*, Physiologie, vol. i., p. 310.
Annales D'Hygiene Publique, etc., v. xxiii. pp. 202-3.

the expectation of life at the age from birth to 20 is for males, over 45 (45.74) years, and for females, 46 (46.46) years; and at the age from 20 to 25, it is 38 years for males, and about 39 (38.98) years for females."*

The mean average duration of life from birth, in Philadelphia, for the 11 years ending December 31st, 1871, I have determined to be 24.99 years, or, still-births included, 23.60 years. †

In the city of Providence, R. I., the mean average age attained by decedents from 1856 to 1870 was 27.09 years. The average age attained by all the males who died in Rhode Island in 1871 was 32.57 years, and the average age of all the female decedents 34.43 years.

Tables of assignable annuities for lives, kept in Holland for 145 years, show that a given number of females lived about 3 or 4 years longer than the same number of males. ‡

INFLUENCE OF CITY AND COUNTRY LIFE.

One of the most curious facts in connection with the relative longevity of the sexes is the influence of country and city life. Women are longer-lived in cities than in the country, while men are longer-lived in the country than in the city, as may be seen by the following:—

Quetelet§ says that "the prosperity of the state ought to consist less in the multiplication than in the conservation of the individuals of which it is composed."

This authority finds the mortality in cities in Belgium, as compared with country districts, as 4 to 3.

After birth, according to Quetelet, the probabilities of life in Belgium are as follows:—

	MALES.	FEMALES.
In cities	21 years.	28 years.
In country	24 "	27 "
At 5 years in cities	48 "	51 "
At 5 years in country	51 "	48 "

The probability of life reaches its maximum at five years.

In the population of Belgium there were 91.14 males to 100 females in the cities, and 99.42 males to 100 females in the country districts. Among the deaths there were 101.45 males to 100 females in cities, 99.20 males to 100 females in country districts. There is, therefore, an excess of more than 5 per cent. in the deaths of males over females in cities, while the proportion of the sexes among the deaths in the country is scarcely different from that in the living, in the general population.

In the State of Rhode Island (1871) [City of Providence excluded], the average age of female decedents was 32.35 years, while the average age of this sex in the largest city (Providence) was 37.92 years.

I have stated, in another place, that the number of still-births and the proportion of males in such cases, was greater in the country (the excess amounting to 9.3 per cent. in Belgium) than in the city. This is in some degree due to the greater fecundity and larger number of male conceptions in the country districts over cities, but there are other causes to which the death of a larger proportion of the difference between the mortality from this cause in cities over the country is due: and principal among these I would suggest the delay and lessened facilities for calling in a practitioner, and less skilful obstetrical aid, afforded to the parturient woman and her issue. Seeing that still-births are more frequent in the country, and as this condition of the child is usually attended with greater danger to the mother, we are not surprised to find greater mortality among child-bearing women in the country than in the city. Whether the greater mortality of females of all ages in the country than in the city is principally due to this cause, I am not prepared to state, but am persuaded it is not.

In the State of Michigan (1870) there were 10,766 deaths, 150 or 1.3 per cent. of which were recorded as occurring among women in childbirth. In Philadelphia, for the 11 years ending 1870, there were but 93 deaths registered from this cause, or .053 per cent. of total mortality; of these, 1 was from 15 to 20 years of age; 43 were from 20 to 30; 41 were from 30 to 40; 8 were from 40 to 50; average age of all at death, 31.05 years. In Rhode Island, 1871, there were 27 deaths in childbirth, or .808 per cent. of whole mortality; in Providence, the principal city in the State, only .567 per cent. of total mortality was from childbirth. According to the U. S. census for 1870, the deaths from childbirth, abortion, and puerperal convulsions numbered 4,810, or .977 per cent. of total mortality. In 1860, 4,066 women died from these causes, or 1.033 per cent. of total mortality. In 1850, 3,117, or .965 per cent. of mortality. Quetelet has shown, in the following table on the influence of the sexes on the deaths at different ages, that from the 14th to the 50th year of age, or during the child-bearing period, in cities 1,025 females die for every 1,000 males, while in the country, 1,215 females die to every 1,000 males, during the same period. In this same table, which we give below, in cities, from 50 to 100 years of age, 1,185 females die for every 1,000 males.

*Table showing the influence of the sexes on the deaths at different ages, in Belgium.**

Ages.	Deaths of Females for one Male death. In the Cities.	In the Country.
Still-Born,	0.75	0.59
From 0 to 1 mo.	0.75	0.73
" 1 to 2 "	0.73	0.84
" 2 to 3 "	0.82	0.83
" 3 to 6 "	0.79	0.86
" 6 to 12 "	0.94	0.97
" 1 to 2 yrs.	0.94	1.03
" 2 to 5 "	1.00	1.06
" 5 to 14 "	1.12	1.07
" 14 to 18 "	1.22	1.34
" 18 to 21 "	1.02	1.08
" 21 to 26 "	0.79	0.90
" 26 to 30 "	1.00	1.17
" 30 to 40 "	1.14	1.60
" 40 to 50 "	0.98	1.20
" 50 to 60 "	0.93	0.85
" 60 to 70 "	1.04	0.95
" 70 to 80 "	1.30	1.00
" 80 to 100 "	1.47	1.09
	.9857	.10084

* *Jarvis*, "The Increase of Human Life," from Farr's English Life-table, 1864, pp. 36, 38.

† From the author's paper on "Statistics relating to the birth-rate, mortality, and movement of the population in the City of Philadelphia, from January 1st, 1861, to December 31st, 1871," pp. ——, in *Penn. Monthly*, ——, 1873. It is to be regretted that the Registrar's reports do not give the facilities for calculating the mean average age by sexes.

‡ *Dr. John H. Griscom*. "Prize Essay on Physical Indications of Longevity," N. Y., 1869.

§ Loc. cit., p. 51.

* *Quetelet*, Sur la Reproduct., Mortal., etc., 1832, p. 68.

† 101.45 males to 100 female decedents in cities; 99.20 to 100 in country.

while in the country there are only 972 females to every 1,000 males attaining these ages. In Belgium, where these calculations were made, there are in the population, of all ages, 1,098 females to 1,000 males in cities, and 1,006 females to 1,000 males in the country.

There is scarcely a single city of any magnitude in which the female population is not in excess of the male, though there be an excess of from 2 to 6 per cent. of males in the births. The proportion of females in the population of cities, as well as in the births, is nearly always greater than in the surrounding country.

EFFECT OF RACE.

I have shown in my previous article * that race had some influence on longevity, but neglected to mention that the colored population of Philadelphia had a much lower degree of viability than the white,—the whites, during the period from 1820 to 1830,† lost 1 person by death to every 42.3 inhabitants, while the colored population lost 1 in every 21.7, or about twice as many proportionally; but what is most curious, is the fact that the black males lost 1 to every 14 colored inhabitants, while the black females only lost 1 to every 22 inhabitants; and this great difference is much increased when we state that the female portion of the colored population exceeded the male in numbers by 32 per cent., and yet they had an excess of male deaths amounting to 13 per cent., exclusive of still-births.

Thus it appears that the race which has a lesser degree of viability declines most in the male line. This statement is further illustrated and corroborated by the Rhode Island report for 1871,‡ which gives the average age of colored male decedents 23.13 years, while the females reached an average of 36.85 years.

In New Orleans (1872) about one-fourth of the whole population are colored people, while more than one-third of the total mortality was from among their number.

The greater mortality of colored people in large cities is probably due to the larger proportion of mulattoes among them. Mulattoes are less fecund, and have a larger proportion of female births and male deaths than either the pure white or black race alone. According to the census of 1870, there were 3,500 persons aged 100 years and above. Of these, 642 were native whites, 322 foreign-born whites, and 2,537 colored. Of the first, 383 were women and 259 men, or 676 males to 1,000 females; of the second, 187 were females and 135 males, or 721 males to 1,000 females; of the third, 1,652 were females and 885 males, or 535 males to 1,000 females. It is curious that there should have been so large a proportion of colored persons among the centenarians, as there are only about four millions colored to the thirty-eight millions of whites in the United States, particularly as all we have collected concerning this race has shown them to be shorter-lived than the whites.

Another proof of the decline of the race in the male line first, is seen in the frequency with which we meet with such passages as the following in genealogical, historical, and archæological research, viz.:—"Represented only through female descendants,"§ or, "the cases are few in which the best informed genealogical antiquary could show a male heir (*i. e.*, a person descended in an unbroken male line) to any of these heroes in any conspicuous position in the country," * or, "the name became extinct by his issue, an only daughter, marrying Mr. ——," &c. By reference to works on dormant and extinct hereditary titles of nobility, the frequency of the phrase "extinct from having no male issue," is quite noticeable.

This fact is further corroborated by Aristotle,† who says that "those who have been barren, and either after great care, or from any other cause, at last conceive, more frequently bear a daughter than a son." Hippocrates, Pliny,‡ and Lucretius§ are of the same opinion. The same authorities say that "some women never go to their full time, or if by dint of great care and the aid of medicine they do give birth to a living child, it is mostly a girl." Again, there is a much larger proportion of females among first‖ and last children than in intermediate births.¶ The greater the fecundity the greater the proportion of males, and *vice e versâ*. From all this it appears that there are more "only daughters" than "only sons."

"In in-and-in breeding," says Walker,** "I believe the generative power fails *first* or *chiefly* on the part of the male."

"You are, I think, probably right," says Mr. Knight, "in supposing that the powers of the male would first fail, though in nine cases out of ten or more the defect is in the female.

"I had reason to believe that in breeding in-and-in, to an injurious extent, the powers of the male fail first. I once, in the same season, reared two bulls, of which the parents were nearly related, and both proved perfectly impotent; at least both failed to get a single calf, though the young females bred well enough, whilst young at least."

This view of degeneracy is diametrically opposed to that of Devay,†† who says: "C'est presque toujours par les femmes que commence la dégénérescence des races et des familles."

Jews in Prussia have on an average, in their births, 117.79 males to 100 females, while the general population have only 106.50 males to 100 females, yet there are in the general population of Prussia, of all ages, 99.19 males to 100 females, while among the Jews there are only 96.72 males to 100 females. This difference is certainly too great to be accounted for by immigration and emigration, and is probably due to the greater viability of the Jewish woman, from which we may infer that the Jewess exceeds the Jewish man in years by a greater proportionate number than the Christian woman exceeds the Christian man. This, too, corroborates the statement already made, viz., that races decline in the male line first. An evidence of this decline is seen in the smaller stature of the Jewish man compared with the Jewish woman. The same thing may be observed among the Chinese and Japanese. Men whose ancestors have lived in cities for several generations are much shorter in stature than men who with their ancestors were born and bred in the country, while the women of the former class are not so sensibly, if at all, affected by city life; indeed, it would seem, as shown in another place, as if city life were rather favorable to "the sex" if the analogy of longevity holds. Of the stature of the human race Geoffroy St. Hilaire says:—

"Variations in stature in the human race are inclu-

* "Longevity and other Biostatic Peculiarities of the Jewish Race," New York Medical Record, May 15th, 1873. Pp. 241–2–3–4.

† *Emerson*, Medical Statistics of Philadelphia, from 1820–1831. Am. Journ. Med. Science, 1831, p. 57.

‡ Compiled by Dr. Caswell.

§ Sussex Archæological Collections. Vol. xv. p. 122.

* *Mr. Joseph Hunter*, "Critical and Historical Tracts," 1850, p. 3.

† History Anim. B. vii., C. vi.–3.

‡ Hist. Nat. B. vii., Ch. xi.

§ De Rerum Natura. B. iv., v. 1242 et seq.

‖ *Burdach*, Physiologie, vol. ii. p. —.

¶ The writer purposes discussing the "Physical Aspects of Primogeniture."

** "Intermarriage," &c. Philadelphia, 1851, p. 205.

†† Hygiène des familles.

ded in much narrower limits than individual variations. The size of women is less variable than that of men."

From the above it would appear that the *Jewish woman is exceptionally long-lived*, and the *colored man*, especially the *mulatto, is exceptionally short-lived*.

I am reminded that "we must always handle the manner or process of man's special creation with great reverence and caution. But if it shall ever seem allowable to apply to it the rule which prevails in reference to the lower creatures," we should be constrained to believe, from our researches and observations, that, from a *purely physical stand-point*, if the sexes were created separately, the woman was developed, evolved, or created first, and man, by a slower, more tedious process of evolution, was a secondary or higher development from the female, or if the original sexual condition were hermaphroditic, the male organization was eliminated from the female by developmental evolution. Man being the secondary creation is the first to exhibit physical decline or degeneration, and woman will consequently survive him in the process of final extinction of the race.

*Table exhibiting the number, proportion, and percentage of sexes in the population, births, and deaths, from some hereditary diseases and accidental causes, etc., occurring in the city of Philadelphia, from Jan. 1st, 1861, to Dec. 31st, 1871.**

	Total No.	Per Ct. of whole No. dying.	Males to 100 Females.
Population of Philadelphia, 1870	674,022		89.50
Births for the 11 years, 1861–72	182,627		110.65
Deaths " " " all ages	174,000		113.44
" Still-births excluded	165,601		112.29
" Still-born	8,396	4.8	133.50
" of Children under 20 yrs. from all causes	93,775	55.9	113.61
" " Adults (all above 20 years) from all causes	76,142	43.7	103.20
" from old age (from 60 to 110 years)	4,362	2.5	53.42
" " Murder and violence, all ages	175	.1	416.20
" " Suicide, "	339	.19	438.09
" " Intemperance, "	405	.23	156.84
" " Wounds, "	56	.02	1700.00
" " Apoplexy, "	2,043	1.20	124.25
" " Gout, "	50	.028	284.61
" " Diseases, Inflammation, and Congestion of the Heart, all ages	4,641	2.66	102.35
" " " " " under 20 yrs.	903	.51	136.36
" " " " " above "	3,741	2.15	95.55
" " " " Brain, all ages	9,005	5.21	132.13
" " " " " under 20 yrs.	6,320	3.63	118.45
" " " " " above "	2,745	1.58	324.50
" " Scrofula, all ages	726	.42	120.36
" " " under 20 yrs.	581	.33	122.59
" " " above "	155	.09	112.33
" " Pulmonary Consumption, all ages	22,242	12.78	99.15
" " " " under 20 yrs.	3,087	1.78	77.31
" " " " above "	19,155	11.00	103.30
" " Paralysis, all ages	2,207	1.26	122.92
" " Cancer,† "	2,329	1.34	43.05§
" " Diseases peculiar to women,‡	1,202	.69	

* The above table was elaborated by the author from Geo. E. Chambers' (the Registrar) reports.

† In the author's paper on "Deaths from Cancer, occurring in Philadelphia from January, 1861, to Dec. 20, 1870, showing the relative proportion of males and females dying of this disease, and the percentage of women dying of Cancer of the Uterus" (Journal of Gynæcological Society, Boston, Sept., 1872, pp. 201–2–3–4; ext. in N. Y. MED. RECORD, Feby. 1st, 1873), he has shown that 2.32 per cent. more women die of Cancer than men, and that of all the women dying of Cancer, 28.66 per cent. die of Cancer of the Uterus, or 20.04 per ct. of the whole number of deaths from this disease without regard to sex; of these 39.2 per ct. die before the 45th year, and 60.8 per ct. after. Of all the women dying of Cancer, without regard to seat, 65.7 per ct. die after 45 years of age.

‡ The diseases referred to with the average age at death (as brought out in the paper above referred to) are—Cancer of Uterus, 49.08 yrs.; Cancer of Breast, 56.84 yrs.; Inflammation of Uterus, 27.94 yrs.; Ulceration of Uterus, 47.85 yrs.; Rupture of Uterus, 34.09 yrs.; Puerperal Fever, 29.55 yrs.; Child-bed, 31.58 yrs.; average age of all decedents from these affections, 39.53 yrs. The percentage dying at different ages was as follows:—15–20 yrs. 2.04 per ct.; 20–30, 23 per ct.; 30–40, 27.06 per ct.; 40–50, 18.27 per ct.; 50–60, 16.69 per ct.; 60–70, 8.07 per ct.; 70–80, 3.88 per ct.; 80–100, .92 per ct.; before the Climacteric, 61.88 per ct.; after the Climacteric, 38.12 per ct. Loc. cit., p. 2-2.

§ The proportion in Providence for 15 yrs. ending 1871 was 37 males to 100 females. In England, 1856, 4,069 males and 1,790 females died of Cancer, or as 41.3 males to 100 females.

* Governeur Emerson, M.D., on the excess of male over female deaths as exhibited in health reports of Philadelphia. American Journal Medical Sciences, 1835, p. 56; transl. into Annales d'Hygiene Publique by M. Villermé, 1836.

In Austria (1810) the females in the population exceed the males in numbers by a fifth. In Vienna, 1819, the females were nearly double the number of males.

MORTALITY IN UNITED STATES—CENSUS OF 1870.

	Males.	Females.
Hernia	165	153
Still-born	5,282	3,778
Old age	3,419	4,597
Malformations	195	169
Consumption	33,971	25,925
Disease Nervous System	33,550	26,905
" Circulatory "	9,055	7,979
" Respiratory "	35,244	28,527
" Digestive "	29,774	24,205
General Diseases, A	47,466	47,366
" " B	45,261	48,191
Paralysis	3,842	3,659
Apoplexy	2,982	2,244
Scrofula	1,777	1,641
Cancer	2,501	3,923
Gout	33	10
Urinary System and Male Generative Organs	3,544	1,300
Diseases Female Generative Organs		1,518
Skin Diseases	1,063	870
Poisons (alcohol, lead, &c.)	1,752	599
Suicide	1,080	285
Murder	1,967	150
Execution	51	
Accidents and Injuries	17,517	5,223

The following table, from the Michigan Report, compiled by Dr. Baker, will show the ages by sexes of the living and decedents:—

Average age in years.

	Total.	Males.	Females.	Excess of Males.
Deaths, as per Census	24.79	25.17	24.39	.78
Living, as per Census	24.32	24.91	23.68	1.23
Deaths, as shown by Registration Returns	23.50	24.05	22.89	1.16
Deaths from Consumption, as shown by Registration Returns	34.95	36.89	33.14	3.75
All living, aged 20 and over, per Census	38.23	38.61	37.80	.81

TOTAL DEATHS BY SEXES.

Though there are but 89.50 males to every 100 females in the total population of the city of Philadelphia, or an excess of 5.5 per cent. of females and 110.65 males born to 100 females, yet 113.44 males die for every 100 females, and if still-births be excluded, still there remains a great excess in the proportion of male deaths, amounting to 112.29 to 100 females—being an excess of males amounting to 10.7 per cent. In 1832–3–4, the excess of male decedents amounted to 7.94 per. cent.* The deaths in Providence, R. I., for the 31 years ending 1870, amounted to 30,167, of which the sexes were about equal, while there were but 88.55 males to 100 females in the entire population. In the entire State of Rhode Island, for the 19 years ending 1871, there were 50,906 deaths, of which there were 97.7 males to every 100 females, while there were but 93 males to every 100 females in the population.

The United States census of 1870 gives 108.45 males to 100 females in the population, while in the 492,263 deaths of that year there were 112.5 males to every 100 females.

The average weekly deaths in London for the last 10 years, 1863–72, has been 788.8 males and 737.4 females, or as 1,069 to 1,000, while there are but 85 males to 100 females in the population.

DEATHS BY AGES AND SEXES.

By reference to the table it will be seen that 53.9 per cent. of all the deaths (excluding still-births) occurred before the 20th year of age, and 113.61 of these are males, to every 100 females; while of the remaining 43.7 per cent. who die after they have reached 20 years, 103.20 are males to every 100 females. It appears from these facts that from birth to 20 years, the viability of females is far greater than that of males, and though in adult life (after the 20th year) it is reduced, yet when we consider that there are but 89.50 males to every 100 females in the general population of all ages and a still smaller proportion of males among adults, the viability of males is much less than that of females. After reading this, it requires no effort of the reasoning powers to understand that the *proportion of females* in the population must *increase*, and this it does, even in the face of the larger accession of male immigrants; for in 1830 Philadelphia had 91.59 males to 100 females, while in 1860 the proportion was 90.93 to 100, and in 1870 it is probably less than 89.5 to 100.

*Proportion of Sexes among the Deaths in different Countries.**

Place.	Number of inhabitants for one death.	Proportion of deaths by sex.	
		Males.	Females.
Norway	50.5	50.7	49.3
England	46.3	50.8	49.2
Belgium	42.4	48.8	51.2
Hanover	42.0	49.8	50.2
Sweden	41.2	51.1	48.9
Holland	40.3	51.2	48.8
Prussia	35.5	51.6	48.4
Bavaria	35.5	51.3	48.7
Saxony	34.4	51.5	48.5
Sardinia	34.4	50.1	49.9
Austria	34.0	50.9	49.1
Wurtemberg	29.1	50.9	49.1
Russia	27.0	50.2	49.8

Proportion of Males to Females in the Population of different States and Countries.†

Place.	Epoch.	Of each 100 inhabitants there are	
		Men.	Women.
Bavaria	1840	48.11	51.89
Sweden	1830	48.16	51.84
Saxony	1840	48.62	51.38
England	1841	48.82	51.18
Belgium	1841	48.98	51.02
Denmark	1835	48.99	51.01
Wurtemberg	1840	49.00	51.00
Holland	1840	49.07	50.93
Kingdom of Naples	1842	49.25	50.75
Austria	1840	49.32	50.68
Russia	1842	49.59	50.41
Norway	1840	49.60	50.40
Hanover	1842	49.70	50.30
Prussia	1840	49.90	50.10
United States	1870	49.97	50.03
United States	1840	50.89	49.11
Sardinia	1838	52.18	47.82

We see by this table that in every country measurably exempt from the influences of emigration, females are in excess, though there is an excess of 3 per cent. of males in the births.

STILL-BIRTHS.

From the moment of birth females have a higher viability than males. In Philadelphia, for the eleven years ending 1871, 4.8 per cent. of all the decedents were still-born children, of which there were 133.50 males to every 100 females, while in the total number of births there were only 116.65 boys to 100 girls. In Belgium, where the most accurate records are kept, 140 boys are still-born to every 100 girls in the cities; in the country districts, 169 boys are still-born to every 100 girls. The proportion of boys to girls in all births is, in cities, 105.29; in the country, 106.10, to 100 girls. This great excess of males in the still-born in country districts over cities, is very remarkable, and may be ascribed to larger size of child's head, and greater delay and less expertness in obstetrical aid. To this latter cause may be ascribed the greater mortality of women during the child-bearing period in the country over those in the city, as indicated by Quetelet's table.* I am constrained to believe, however, that the fact of a greater number of males being still-born than females is due to *defective development*, as well as the larger head. The fact of man being the type of the race, the highest degree of physical evolution yet exhibited by the human race, it follows that any defect or degeneration in development must be felt in the male first; and we feel warranted in asserting that the man is the first to exhibit signs of decline—in stature, weight, constitution, viability, &c. Thus we have a larger proportion of idiots, deaf, dumb, and blind among men than among women. So we have more malformations by defect among males, and more malformations by excess among females. Statistics show more idiots among men, and more insane among women. In Philadelphia, during the 11 years ending 1871, of the deaths from "malformation," 139 were males, and 87 females; or 159.77 to 100. In the city of Providence, for 15 years ending 1870, the deaths from this cause were, males 53, females, 33; or 162.42 to 100.

THE CERTIFICATES OF FAMILY PHYSICIANS.

By WILLIAM C. WEY, M.D.,

ELMIRA, N. Y.

An engagement between a physician and his patient, in its mutual obligations, is as binding, morally and legally, as any other implied contract, and the failure of either party to perform makes him liable for the consequences of his dereliction. In this respect the profession of medicine possesses no advantages over the trades or the ordinary commercial relations of society. Estimated by such a standard, medicine, while advanced to the dignity of a profession, is surrounded by and made subservient to the laws and usages which govern the arts and crafts, and is equally amenable to judicial review, discipline, and punishment. Unlike the arts and crafts, however, medicine is obedient to a law within itself, which may or may not find expression in a code of carefully-framed rules. Long before a written code of ethics found favor in the profession, which is a very modern suggestion, a sense of personal or individual honor among physicians served to keep inviolate the nature and terms of the engagement or contract between them and their patrons. The force and character of this agreement, though not strengthened by a written code, simply finds amplification in its precepts and declarations.

In a better, in one sense, though not in a more scientific or learned age, when a higher standard of honor prevailed, a written code was not required. Ignorance of professional ethics could not be accepted in extenua-

*Le Jeune, Memoire sur la Population, in *Journ. des Economistes*, 1847.
† *Boudin*, Annales D'Hygiene Pub., v., xlviii., p. 268.

* Sur la Reproduct., Mortalité, &c. 1832, p. 68.

tion of their violation. In a looser period, with cheapened education, and, as a consequence, diminished honor and responsibility, a code of rules became necessary for the purpose of keeping the ranks in the profession informed and educated up to the standard of accountability current among the wiser and more loyal members of the brotherhood. In these days, as in former days, with or without a written code, a few lead the way, and the many follow or disregard the call, as they are impelled by education, habit, policy, or some other motive.

I am led to consider this subject in connection with the question—"Ought a family physician to grant a certificate in case of application for life insurance?"

I have no hesitation in asserting that it is no part of his duty to furnish information to a life insurance company in respect to the health of individuals who may have placed themselves under his professional care. Not only is it no part of his duty as a medical man, but it is virtually a betrayal of the trust and confidence imposed in unreserved relations between patient and physician.

Even with knowledge that the person to be insured is, and always has been, in such absolute health as to make reply to the questions asked on such an occasion a mere matter of form, and an endorsement of his physical and mental state, like endorsement of his credit or character, it is quite as much a professional act and service as if the physician's statement raised a doubt in respect to the integrity of the applicant's pulmonary or psychological functions.

If it is a friendly office purely, it carries professional significance along with it, thereby violating obligation on the one hand under cover of a personal favor, and communicating valuable information to a life insurance company on the other.

If the certificate is given for a fee, paid indifferently by the party seeking to be insured or by the company, it suggests an imputation that a moneyed compensation may influence the judgment to be rendered. This objection, in view of the paltry sum usually paid by an insurance company, is scarcely worthy of consideration. In the former case, it may be well to observe that an opportunity is offered an unscrupulous applicant and an equally unscrupulous "family physician" to combine, and for a purpose to produce a certificate, which shall reveal a standard of health upon which a policy of insurance will be sure to follow. If a physician, occupying the position of medical examiner for a highly reputable life insurance company, was found so culpable and criminal as to recommend a consumptive, in the last stages of disease, as a first-class risk, on whose life a policy was issued, it is not difficult to conceive of collusion between an applicant and a family physician, prompted by motives equally offensive and condemning.

It is exceedingly disagreeable to dwell on this feature of the subject, as evidencing loose morals in the profession. An ideal standard of medicine takes no cognizance of such illustrations of baseness. Every-day practical experience with the profession as it is, and not as it should be, or indeed as it would be, if raised to an even or uniform basis by education, has forced upon us the unwelcome conviction that, in spite of codes and journals and books and teaching from an endless variety of sources, the *average* men in our ranks are not above suspicion of being governed by selfish and mercenary motives.

The opinion of a reliable family physician, far beyond the recommendation of a medical examiner, carries weight with a life insurance company. Hence the importance of obtaining his approval of a risk. Paradoxical as it may appear, the physician knows the applicant, the corporeal applicant, more intimately than he knows himself. In the undisguised character of patient, his physical, mental and moral attributes have been clearly revealed to his attendant. Nothing has been withheld, simply for the reason that to keep back information would limit the ability of the physician to render prompt and efficient aid and service.

Considering the confidential relations thus engendered and the value of the information acquired by the physician, the usual questions asked in this connection by a life insurance company—"Have you been in the habit of seeing him frequently? Have you given him medical attendance? If so, for what diseases?"—must appear like an attempt harshly to invade the precincts of the sick-room, and cause the medical attendant to betray the interests of those who have implicitly confided in his truth and honor.

The questions above given cover the whole ground of a physician's intimate intercourse with his patient, laying bare his responsible and guilty acts as well as the infirmities for which he is not accountable.

Surely it is not the object of life insurance companies to seek to compromise the office of family physician, or to invite, or for compensation to engage, him to do violence to his scruples and convictions. The custom of requiring a family physician's certificate in application for life insurance was established as a matter of business, without considering the nature of his engagement to his patient or the extraordinary demand which it exacted.

It is remarkable that a common professional sentiment did not, long ago, protest against such an attempt to procure information, on the ground, already mentioned, of infraction of ethics, and disregard of individual obligation and propriety. That a more correct estimate of this question is current in the profession I am disposed to believe, from pretty large observation among my colleagues, and from the more general extension of life insurance interests in every city, village, and hamlet in the State. The subject is thus brought directly to the attention of medical men, and they are compelled to give it more than usual scrutiny,—such scrutiny as embraces the delicate nature of the duties of the family physician in a specific as well as in a more enlarged and comprehensive field.

ON METHOD IN THE EXAMINATION OF APPLICANTS.

BY A MEDICAL DIRECTOR.

THE physician, when called to pass judgment upon the life-probabilities of an applicant, is in very much the same position as the watchmaker whose opinion is asked about the quality of a watch. The latter first glances at the case, then opens it and reads the maker's name, and finally, having listened to the action of the escapement, inspects the complex machinery filling its interior. If fairly experienced in his art he will then pass a tolerably correct judgment upon the qualities of the watch.

In a very similar manner the physician should examine into the moral and physical antecedents and condition of the applicant. He should first look at the case,—his general exterior, his expression and complexion; whether, for example, he is emaciated by disease or bloated by alcohol; whether nervous and timid, or too eager to boast of his physical endowments and promise of long life. All these points can be carefully and quickly noted by the examiner during the brief time occupied by the interchange of the ordinary courtesies.

The maker's name, if genuine, tells as important a story to the watchmaker as the applicant's family his-

tory does to the medical examiner. A knowledge of the inherited tendencies to disease should be in the possession of the examining physician before he inquires, either by cross-examination or by direct exploration, into the physical condition of the applicant. Hence the second step of the examination should consist in ascertaining as correctly as possible the family history.

Next comes the personal history; and here the parallel no longer holds good. The watchmaker does not care to be told what injuries the watch may have met with, for, if these have been at all serious, he will be able to detect them by a careful inspection. The medical examiner, however, depends largely on the personal history of the applicant in forming his judgment of the desirability of the risk. The sicknesses and physical injuries of the past throw considerable light upon a person's life-probabilities; they also lead the physician to interrogate certain organs or functions more carefully than he otherwise would. For example, previous attacks of inflammatory rheumatism would call for a more than ordinarily careful investigation of the heart and lungs; and an attack of lung fever, so called, would lead us to cross-examine the applicant very thoroughly regarding the circumstances under which the disease first manifested itself, the symptoms developed, the length of time before convalescence set in, and the subsequent persistence of a cough.

In this connection I would venture the suggestion that, having listened to the applicant's answer to the broad question,—"What sicknesses have you had in your lifetime?"—we should "jog" his memory by interrogating the organs of the body one by one, commencing with the head and passing on down to the feet. Thus, for the head, we can put the following series of questions:—Are you subject to headaches? Have you ever had "fits" of any kind? Have you ever been out of your head? Are you subject to dizziness? Have you ever been paralyzed? Have you ever had any difficulty with your eyesight? Have you ever been troubled with a discharge from the ear? Are you subject to sore throat? In the same manner the various organs of the chest and abdomen may be interrogated in a very short time.

The question, "Have you any swellings or sores in any part of the body?" which is intended to elicit the necessary facts regarding the integumentary system, sometimes brings to light deeper and more serious troubles. The following incident, which occurred recently in one of our offices, illustrates the importance of this question:—

The applicant, an apparently healthy man, had answered all the physician's questions favorably, and was found upon physical exploration to have a sound heart and lungs. In answer to the question just mentioned, he said he had noticed for some little time past a small lump in the groin, but, as it had given him no trouble, he had paid no attention to it. The physician examined the lump and found it to be a small aneurism of the external iliac artery.

Aided by a knowledge of the applicant's personal and inherited weaknesses, the physician will be better prepared for the last step of the examination,—the physical exploration. If he were to resort to it at first, the ordeal of auscultation and percussion of the chest would be pretty sure to accelerate the heart's action to such a degree that he would not be able to form a correct idea of its habitual rate, rhythm and force. It is therefore better to postpone the physical examination to the last.

It is not the purpose of this brief article to discuss how this part of the examination should be conducted, but simply to suggest what seems to be the most practical and at the same time the most logical order in which to carry out the details of the investigation. By adopting a definite method and always following it in our examinations, we shall avoid the danger of omitting some important part of the inquiry. This will appear the more necessary if we but bear in mind that the applicant will rarely volunteer any information that may cause his application to be rejected, though he is ready to answer all our questions truthfully.

OUR LIFE INSURANCE DEPARTMENT.

To the Editor of The Medical Record.

I am much gratified to see that you have added the medical side of life insurance to the many other interesting and practical features of your journal. The articles presented are all of much practical value, and just this kind of information is sadly needed by the majority of medical examiners.

Permit me, as an examiner of some experience, to call attention to some points connected with the business, which I think deserve attention. . . .

The article in Record for May 15, entitled "On the Relation of the Medical Examiner to the Business of Life Insurance," by a Secretary, is very just and true, and certainly demands no more of examiners than a proper personal independence and appreciation of professional obligation would at all times prompt the *right-minded* to perform. But just here is the trouble, and the secretary evidently understands it, for he says it is this very want of personal independence which is far more dreaded by underwriters than any mere want of professional capacity. Unfortunately the two combined are not unfrequently met with, and I have seen and known of more than a few instances of such an utter want of both in the examiner as to make him the *subservient tool* of the agent. It is the agent's business to solicit risks, and it is his pecuniary interest to have those risks approved at the home office; so he is never backward in using an ass of a doctor if he can. And not infrequently does it occur that the agent purposely avoids giving business to a man he knows to be competent and independent, preferring a more *compliant* examiner.

I have been cognizant of this state of things for so long a time, and have seen but little, and very imperfect, effort made for its correction, that I have begun to think the companies were indifferent about it—supposed they were making fortunes rapidly under this kind of procedure, and did not care to make any additional effort to correct abuses.

If a remedy for this condition of affairs should be sought, I would suggest that one step in the right direction has been taken in securing the co-operation of your journal; another, and most prompt and decided check on these abuses, would be the securing of *competent and reliable medical* men as inspectors of agencies, paying such salaries as would command competent men, who would give the business their entire time. A competent medical man would, by the very nature of his professional training, and sharpened powers of observation, be capable of going into any agent's district, making the acquaintance of the physicians acting as examiners, and *others not so acting*, and render a far more correct opinion, *cæteris paribus*, than a non-professional inspector. . . . .

Permit me, in closing, to suggest that according to my observation here in the South, the tables of average weight to height are at least ten pounds higher than a correct estimate. Medical Examiner.

Original Lectures.

CLINICAL LECTURES ON PUERPERAL FEVER.

DELIVERED AT BELLEVUE HOSPITAL,

BY FORDYCE BARKER, M.D.,

PROFESSOR OF CLINICAL MIDWIFERY AND DISEASES OF WOMEN IN BELLEVUE HOSPITAL MEDICAL COLLEGE.

(Reported phonographically for the MEDICAL RECORD.)

LECTURE I.

DR. VAN WAGENEN read the following history:—

Annie ——, æt. 25, primipara. Labor natural. First stage, 2.26; second stage, 5.25 h.; third stage, 5 m.

Delivered Dec. 31, 12.30 A.M.

Dec. 31.—P.M.: Respiration, 28; pulse, 104; temp. 99½°.

Jan. 1.—Respiration, 28; pulse, 120; temp. 102.

Jan. 2.—P.M.: Respiration, 50; pulse, 145; temp. 105°. Patient is sweating profusely.

Jan. 3.—A.M.: Respiration, 40; pulse, 105; temp. 103°. Patient was sponged and the temperature fell.

Jan. 4.—Respiration, 30; pulse, 138; temp. 102°. Patient behaves in a very hysterical manner.

Jan. 5.—Respiration, 40; pulse, 120; temp. 101°.

Jan. 6.—Respiration, 36; pulse, 138; temp. 101°. P.M. Patient was relieved by catheter of ℥ viii. of urine.

Jan. 7.—Respiration, 30; pulse, 111; temp. 102°. 9 P.M.: Abdomen tympanitic, and very slight pain upon the right side.

Jan. 8.—11½ A.M.: Respiration, 60; pulse, 135; temp. 104°. Patient feels quite well. Ordered ⅛ gr. of morphine, stupes of turpentine, and quinine, grs. iii. q. 3 h. 3½ P.M.: Respiration, 36; pulse, 120; temp. 100°. 8 P.M.: Temp. 102⅘°. 12 midnight: Sol. morph. (U. S.) ♏ ii. Stupes and quinine continued. Slight tympanitis and tenderness.

Jan. 9.—6 A.M.: Sol. morph. (U. S.) ♏ ii. Slight tenderness and tympanitis. 9½ A.M.: No tenderness. Respiration, 30; pulse, 120; temp. 103°. Sol. morph. (U. S.) ♏ i. 12 M.: Respiration, 24; pulse, 123; temp. 103°. Some tenderness, especially upon right side of abdomen; no stool to-day; sleeps most of time. Sol. morph. (U. S.) ♏ i. and tr. verat. virid. ♏ iii. Catheterism. 2.45 P.M.: Ord. ℞ Tr. ferri mur. ♏ ss.; quiniæ sulph. ℈ i.; aquæ puræ, ♏ iss.; Syr. aurant cort., ♏ ii. M. Sig. ♏ ss. q. 3 h. and tr. verat. virid. gtt. iii. q. 1 h. 4.30 P.M.: respiration, 21; pulse, 120; temp. 101⅘°. Pupils contracted; tympanitis, and tenderness upon right side; tongue white. 6.45 P.M.: respiration, 27; pulse, 120; temp. 103. Patient sleeps all the time; pupils contracted; perspires freely. 10 P.M.: respiration, 24; pulse, 120; temp. 103°. Perfectly conscious and answers questions intelligently. Tr. verat. virid. gtt. v. and sol. morph. (U. S.) ♏ i. Some subsultus; no pain; ice to eat, and milk.

Jan. 10.—4 A.M.: Has received tr. verat. virid. in gtt. iii. doses every hour since 10 P.M. of the 9th, and sol. morph. (U. S.) ♏ i. doses every two hours. Pulse, 85; temp. 102°. Has been vomiting freely for about half hour dark greenish matter; no pain. Tr. v. v. gtt. iii. 7 A.M.: Patient has vomited considerably since 4 A.M. Sol. morph. (U. S.) ♏ i. and tr. verat. virid. gtt. iii. 8.30 A.M.: Respiration, 18; pulse, 90; temp. 100⅘°. No tenderness over abdomen upon percussion; ice discontinued. 9 A.M.: Patient received tr. verat. virid. gtt. iii., sol. morph. (U. S.) ♏ i., and ♏ ss. of the mixture of quinine and iron. 10.30 A.M.: Respiration, 24; pulse, 93; temp. 101¾°. Sol. morph. (U. S.) ♏ i. and tr. verat. virid. gtt. iii. There is slight pain over lower part of abdomen. 12 M.: Respiration, 30; pulse, 105; temp. 102. Patient has been awake and talking to the other patients. Sol. morph. (U. S.) ♏ ii., tr. v. v. gtt. v. 2 P.M.: Respiration, 28; pulse, 108; temp. 103¼°. Patient now has pain over whole abdomen; breathing mostly thoracic; limbs not flexed upon abdomen; has just vomited again about a quart of fluid of a light-green color. Sol. morph. (U. S.) ♏ i. tr. v. v. gtt. v. 3 P.M.: tr. v. v. gtt. iii. Vomited a little in about 10 minutes after taking the last medicine. 4 P.M.: Respiration, 20; pulse, 90; temp. 103°. 8 P.M.: No vomiting since 3.10 P.M.: Tr. v. v. has been continued every hour in gtt. iii. doses, and morphine in ♏ i. doses every two hours. Now, considerable pain over abdomen; sleeps constantly; easily aroused; answers intelligently. Respiration, 24; pulse, 115; temp. 103. Ordered tr. v. v. gtt. v., sol. morph. (Mg.) ♏ v. hypodermically. 10 P.M.: Some pain and tenderness. Respiration, 25; pulse, 108; temp. 103½. Sol. morph. (Mg.) ♏ vi. and tr. v. v. continued in three-drop doses. 12 midnight; Respiration, 16; pulse, 96; temp. 103¼°.

Jan. 11.—2 A.M.: Respiration, 16; pulse, 90; temp. 102⅝°. Respiration very shallow and irregular; one deep breath followed by 6 or 8 almost unnoticeable ones; pupils firmly contracted; thighs flexed upon abdomen; received tr. v. v. gtt. iii. and soon vomited about ♏ viii. of dark-green material; there is considerable abdominal tenderness. Respiration, 13; pulse, 88; temp. 102⅝°. 2.30 A.M.: Hiccough; medicine discontinued. 4 A.M.: Thorough opium narcotism. 6 A.M.: Respiration, 14; pulse, 90; temp. 102⅝°. During last two hours patient has taken ♏ x. of milk and ♏ ii. of brandy. 9.20 A.M.: respiration, 24; pulse, 99; temp. 103°. 11.20 A.M.: respiration, 30; pulse, 105; temp. 103⅜°. 1 P.M.: respiration, 30; pulse, 99; temp. 103. 2.30 P.M.: respiration, 24; pulse, 112; temp. 103½°. 5 P.M.: respiration, 18; pulse, 114; temp. 103. 8 P.M.: respiration, 21; pulse, 120; temp. 104. 9.25 P.M.: respiration, 21; pulse, 111; temp. 103½°. Patient wanders, and has tried to get out of bed. 11 P.M.: respiration, 18; pulse, 114; temp. 102¾°. Brandy ♏ ii. during last hour; thigh flexed upon abdomen.

Jan. 12.—1.30 A.M.: respiration, 24; pulse, 105; temp. 103½. Thigh extended. Sol. morph. (Mg.) gtt. vi. 3.45 A.M.: respiration, 18; pulse, 99; temp. 103. Slight vomiting; first within 25 hours. 6.30 A.M.: respiration, 21; pulse, 93; temp. 102°. Answers intelligently; pupils contracted firmly. 7 A.M.: Gave a warm enema of brandy, ♏ ss., milk and beef-tea, each ♏ ii., and quinine, grs. x. 8.30 A.M.: respiration, 18; pulse, 96; temp. 102⅘°. 10.20 A.M.: respiration, 27; pulse, 102. 12 M.: Patient has had a stool, quite solid. 12.15 P.M.: respiration, 18; pulse, 114; temp. 103¾°. Respiration irregular; slight delirium. Sol. morph. (Mg.) ♏ viii. 5.45 P.M.: respiration, 20; pulse, 120; temp. 103¼. Thighs flexed upon abdomen. Sol. morph. (Mg.) ♏ viii. hypodermically; no pain. 8.30: Enema of same material as above, with tr. v. v. 9 P.M.: respiration, 16; pulse, 105; temp. 103¾°. 11.20 P.M.: respiration, 12; pulse, 105; temp. 104; respiration extremely irregular.

Jan. 13.—4 A.M.: respiration, 30; pulse, 120; temperature, 103¾°. 6.30 A.M.: respiration, 30; pulse, 135; temperature, 103½. 9 A.M.: respiration, 28; pulse, 150; temperature, 105°. 10.30 A.M.: respiration, 24; pulse, 156; temperature, 106°. 1 P.M.: respiration, 18; pulse, 150; temperature, 106½. 4 P.M.: respiration, 36;

pulse, imperceptible; temperature, 107¼. Died at 4½ P.M.

From Jan. 11, at 6 A.M., until her death, the treatment was continued by using the tr. veratrum viride in doses varying from 1½ to 6 drops every hour or two hours; sol. morph. (Mg.) in doses, hypodermically administered, varying from ℥iii. to ℥viij.; quinine, stimulants, and nourishment given both by mouth and as injections. Vaginal injections of carbolic water and stupes of turpentine were used throughout.

Autopsy made on the 14th of Dec., by Dr. F. Delafield. Brain not examined; heart and lungs normal; liver soft and medium size; kidneys appeared normal; entire peritoneum and contained viscera thickly coated with yellow lymph (pus and fibrin); about 1 quart of purulent serum in the peritoneal cavity; peritoneum not congested. No change in pelvic cellular tissue; uterus bound to right side, coated entirely with lymph; internal surface appears normal. At the insertion of broad ligaments, uterine sinuses filled with puriform fluid, and small abscesses in uterine tissues. Fallopian tubes congested; ovaries congested.

GENTLEMEN: we have now had two cases die in this hospital of puerperal fever. We have no more of the disease at the present time.*

One woman has shown some symptoms of it, but has seemed to respond to the precautionary measures which have been adopted for its arrest.

The question for our consideration now is, what is puerperal fever?

It is that question which I propose to answer. I shall not enter into a detailed account of all the various opinions which have been presented with regard to its nature; for hardly any two authors agree.

There is, perhaps, no department of pathology in which the productions have been of a higher intellectual order than those we already have in our possession upon this one subject.

I already have upwards of 30,000 pages upon this subject in my own library, and yet variation in opinion is characteristic of the whole.

At one time it was believed to be a peritonitis; at another a phlebitis; another class of observers have believed it to be an inflammation of the peritoneum associated with an inflammation of the veins of the uterus and its lining membrane, each or all combined.

In short, a vast number of authors, who are men of the highest intellectual order, and have had the greatest opportunities for observation, have taken the ground that the fever was a local inflammation of some of the tissues, or some of the organs connected with the uterus, occurring during the puerperal period, and that the constitutional symptoms were due entirely to these local inflammations.

The more recently expressed views, which are the currently accepted ones by a great majority of the profession of Germany and France, and to a certain extent in Great Britain, are, that it is an error to suppose that it is a purely local inflammation, but that it is a constitutional poison resulting from the absorption of pus, and carrying it into the circulation, undergoing a peculiar degeneration or decomposition, constituting what is known as septicæmia.

Then, again, there have been a class of men, to whom I belong, who regard puerperal fever as an essential and distinctive disease, having a special poison, the nature of which has not been determined, but which is just as distinct in its character as is the special poison of scarlet fever, typhus fever, small-pox, erysipelas.

My own belief is, that it has a special poison, characterized by certain general phenomena which always belong to the disease, with anatomical lesions which take the epidemical type of the seasons or of the locality in which it occurs; that it may be or it may not be accompanied with any of the local lesions; that it differs from inflammations in its nature and its results, but any and all of the inflammations may be present.

We are aware that it produces purulent deposits, and if they have an external manifestation anywhere it is to be regarded as an effort of the system to eliminate the poisonous element, and the prognosis is more favorable; but when the deposits take place in the internal organs it must be inevitably fatal; that it may be or may not be accompanied by septicæmia; but more frequently in prolonged cases, such as those which last for five or eight days, it is accompanied with septicæmia, but in other cases it is not.

Now, as these views are contrary to the current opinions of the day, I am bound to give my reasons for them. You must not accept them unless they are satisfactory to you. You will do well to examine all the arguments *pro* and *con*, and form your own distinctive personal conclusions and opinions upon all medical subjects, for there is no greater barrier to the progress of medical science than to accept the opinions of medical authors simply because they are regarded as medical authorities.

The principal reasons for the views which I hold with regard to puerperal fever may be embraced under four heads.

First.—That puerperal fever has no special characteristic anatomical lesions.

In one epidemic you will find one lesion, perhaps it may be peritoneal inflammation; this probably is more frequent than any other, and at the same time the epidemic has shown itself where no peritoneal inflammation has existed. In another epidemic all of the lesions may be referred to the thoracic cavity, and purulent or sero-purulent deposits will take place in the cavities of the pleura and pericardium. This shows to us that the peritoneal lesions are not an essential characteristic of the disease.

In the year 1862 we had an epidemic of puerperal fever in this hospital, in which the patients exhibited all the general characteristic symptoms and phenomena, but autopsies showed an entire absence of all lesions in the peritoneum, uterus, uterine sinuses or ovaries. There were found the same kind of pathological lesions in the pleura and pericardium as are seen upon the peritoneum when the lesions are manifested there.

Sometimes the lesion is found principally in the plugging up of the veins of the uterus.

Virchow teaches that it is always so; that the open mouths of the sinuses become blocked up by little thrombi; that these thrombi degenerate, become purulent, and, secondarily, produce inflammation of the lining membrane of the veins; from which pus is carried into the circulation, and constitutional disturbance is the result.

While, however, this may characterize one form of epidemic, it may be absent in nine others. So again you will find all these entirely absent, and the uterus itself will be broken down in its structure, and there may be evidence of gangrenous degeneration of the walls themselves; but this too shows itself only in connection with certain epidemics, and is not characteristic.

In still other cases, and such epidemics have been seen in this hospital, the patients have died, but there was *no lesion* to explain the death. Some authors assert that the lesions are not present, because they are not looked for, and that pus can always

* January 23.

be found. Pure pus alone, however, will produce no serious disturbance in the system in many instances, as is well known, if it does pass into the circulation.

Second.—These lesions are not sufficient to explain the cause of death or the progress of the disease. I think that this may be safely asserted as a fixed law with reference to this disease. The more intense and rapidly fatal the disease, the fewer are the lesions that are found. Just in an inverse proportion to the violence and severity of the disease is the amount of the anatomical lesions. The cases are not very infrequent in which the patients have manifested the first symptoms and died within twenty four, thirty-six, or forty-eight hours, and the more violent the disease is, the more rapid and violent its course, the less of anatomical lesions are found at post-mortem; and from this we have a demonstration that it is not the lesions which cause the death. I became convinced of this fact many years ago, and I arrived at that conclusion by the most minute examination in the way of pathological lesions, in the most violent cases. I would not detract from its value in the least by any experience which I possess to-day, and I think it is a very common mistake to regard these results as the original cause of the disease.

The intense violent poison kills the patient before there is any time for these distinctive changes to take place, which constitute in the minds of many the characteristic features of the disease.

Third.—We may have the most intense inflammation of the pelvic organs, and the disease not be puerperal fever. The autopsical lesions and symptoms in such cases are very different from what is associated with these inflammations when connected with puerperal fever. The patient may have all the violent symptoms described as characteristic of peritonitis, such as intense pain, flexure of the thighs upon the body, exquisite tenderness, etc., and yet only have peritonitis modified simply by the condition of the woman in a puerperal state, following its usual course and terminating in the same way, and no puerperal fever at all. This patient has had puerperal fever, but has had none of the exquisite tenderness which requires the knees to be drawn up, yet has had some pain and some tenderness upon pressure. The same thing is true of phlebitis. This may occur after or previous to confinement, and may not be a severe disease.

Fourth.—The lesions differ essentially from those produced by inflammation. In an ordinary case of peritonitis the result is an intense capillary injection of the surface of the peritoneum, and the production of plastic lymph.

If the peritoneal lesion is the predominant feature in the puerperal fever, we have no bright scarlet hue, but the dark hue from venous and capillary congestion. The effusion, instead of being an adhesive fluid, is commonly so only in a very slight degree, and is generally made up of broken-down pus, flakes of lymph, a pus always sanious and sometimes colored with blood. In the same manner I might go through with the lesions of phlebitis and point out their distinguishing characteristics, but my time is now too limited.

The next characteristic of this disease which shows that it is dependent upon a special constitutional poison, is the fact that it is contagious. I believe the evidence is complete which proves that puerperal fever is contagious. This is not so with regard to special inflammations.

This character, that of the contagion, is sufficient of itself to protect it from being considered as a pyæmia or septicæmia. There are numerous illustrations where some physicians, who have been exposed to puerperal fever, with or without hospital practice, and who have exercised the greatest precaution, have had every woman die, with whom they were present during their confinement, with puerperal fever; while another physician in the same locality will not lose a single patient with the disease. Has it ever been known that one surgeon exposed to septicæmia or pyæmia has thus rendered himself more dangerous to his other patients, while all other surgeons of the same neighborhood were exempt? This alone is sufficient to demonstrate that there is something distinct between the poison of puerperal fever and that of pyæmia or septicæmia. At the same time I not only admit, but assert, that pyæmia and septicæmia do very often occur in connection with puerperal fever.

Some thirty years ago an epidemic of erysipelas broke out in a town some twenty miles from where I was then practising medicine. During the prevalence of that epidemic every woman who was confined in that vicinity died of puerperal fever. The association of erysipelas with puerperal fever has been very often noticed, and some writers have spoken of the poison of the two as being identical; but I do not think there is sufficient proof that they are identical. In this epidemic, however, there was one circumstance which was sufficient to illustrate at least the close affinity which the two poisons bore to each other.

I also believe, contrary to the assertion made in special text-books, that puerperal fever is not confined to hospitals in large cities.

I have just referred to one epidemic where it was associated with erysipelas, and can refer to other epidemics in the country where it has been associated with exanthematous diseases, or entirely independent of any of them, yet all occurring in rural districts, which does away with the idea that it is a hospital disease.

Why is it untenable to suppose that the poison of puerperal fever produces septicæmia, while we know that erysipelas produces septicæmia and pyæmia, and that we also have them occurring in connection with the blood-poisons, as typhus, scarlet fever, erysipelas, etc.?

I will recur to my original points in answer to this, viz.: that puerperal fever is a constitutional, specific disease, having its essential poison, which acts through the medium of the blood, producing its local lesions, its specific forms of development according to certain elective affinities, dependent on the nature of the epidemic surrounding it.

This is my gospel, and I only ask you to consider the question for yourselves.

The clinical history and treatment will be considered at our next lecture.

Original Communications.

CONTRIBUTIONS TO OTOLOGY.

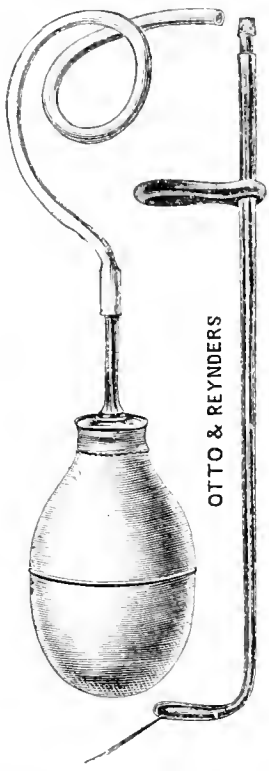
By O. D. POMEROY, M.D.,

NEW YORK.

1. *A Fenestral Eustachian Catheter.*

THE object of this instrument is, as its name implies, the catheterization of the Eustachian tube by means of an instrument passing through the throat instead of the nostrils, as is done with the ordinary catheter. The claim set forth with the above instrument is, that its introduction behind the uvula is much more easily and rapidly effected than by the ordinary instrument, and with less violence. When inflation only is needed, the instrument at one insertion may be

passed, first to the mouth of one tube, and then to the other, by simply turning the beak of the catheter to the opposite side of the throat. The instrument consists of a hard rubber tube, seven and a half inches in length; breadth, at its larger portion, one-fourth inch, tapering to the beak, which is a little more than one-eighth of an inch in thickness. At the larger extremity is a tip for the adjustment of a rubber tube; beyond this, at a distance of an inch and a half, is a perpendicular *guide* passing in an opposite direction to the bent extremity of the tube (in the wood-cut it is wrongly placed), showing the direction of the beak of the instrument when in position. The bent portion of the tube is one inch and three-sixteenths in length (for children it may be about three-fourths of an inch in length), and forms an angle of 70° to 75° with the straight portion of the tube. Within a line or line and a half of the extremity of the tube is the aperture for the injection of air or fluids, and which is the size of a



number one Bowman probe, and is placed at an angle of 50° with the bent portion of the tube; that is, not quite in the end, but a little beyond it, so as to throw the stream of air or fluid *from* the operator rather than *towards* him.

By inspection, this aperture will be found to be nearly in the axis of the Eustachian tube when the instrument is in position.

The catheter is used in the following manner, to wit: It is attached to a Politzer bag, with the usual perforation (for filling with air), by means of a rubber tube; the instrument is then caught in the left hand by its extremity (not by the guide), and, turned on the flat, passed along on the dorsum of the tongue, until opposite the aperture behind the uvula, when it is suddenly turned upwards, and passed to the region of the tube; if the tonsils are enlarged, presenting a too narrow cleft for this semicircular turn, then it must be passed in with the beak turned upwards, and the tongue depressed, either by the instrument or a tongue-spatula.

When it is well behind the uvula, it may, for the right side, be turned so that the guide stands about at an angle of 50° with the horizon, when the aperture in the beak of the instrument will be opposite to the fossa of the Eustachian tube; the opposite turn for the left side brings the instrument in position for the left tube. In all cases it will be well to slightly draw the instrument towards the operator, after its passage behind the uvula, especially if the latter contracts upon it, and against the back wall of the pharynx, which so frequently results. If the uvula persists in this position it is advisable to withdraw the instrument before attempting the opposite tube, as, under these circumstances, much violence might result (*i.e.*, in the excursion of the beak of the instrument from one tube to the other). The proper test as to whether the tube has been placed in position is, first, the facility with which the cavity may be inflated; and, second, in applying a small portion of a very strong caustic solution, it may, by the rhinoscope, be seen whitened exactly where the aperture of the tube was placed during the injection of the solution. The writer, with a twentieth of a drop of a saturated solution of nitrate of silver, has frequently cauterized a minute disk of mucous membrane within the fossa of the tube. The inconstant position of the faucial extremity of the Eustachian tube has not by the writer been observed, as described by some, the position being, according to his experience, sufficiently uniform to give little or no annoyance; but even if it is a little irregular in location, the rhinoscope detects it easily enough.

Any introduction of a faucial catheter under sight by means of the rhinoscope is regarded by the writer as so nearly impossible as to be wholly impracticable. The injection of the tympanic cavity with air by means of this instrument is readily done by compressing the rubber bag when the instrument is in position, and may, if the throat is irritable, be done in a second. If a powerful effect is desired, the aperture in the catheter may be made larger, when all the inflation desired may be attained.

This operation is more readily done ordinarily than Politzer's.

For the injection of fluids the following manœuvre is indicated, and we will assume that nitrate of silver is used: With an atropine dropper, or any convenient instrument, a fractional part of one drop, or two, three or six drops is deposited on an artist's palette, a card, or even a piece of white writing-paper; the beak of the catheter at its perforation is immersed in the drops with the rubber bag compressed (the thumb or finger on the perforation in the bag), then it is allowed to fill with air from the beak of the catheter (and not from the aperture covered by the thumb), by which means the drop is drawn into the tube through this minute aperture. When applied to the Eustachian tube, a second pressure on the bag injects it into the fossa of the tube, and sometimes a little way into the tube itself, in the form of a coarse spray. If a really fine spray is needed, a very minute aperture may be made, but this will not sufficiently inflate the cavity with air, and will give some trouble to keep it from becoming clogged. I had not before stated it, but it is intended to inflate the cavity as well as apply the remedy at the same time.

In ordinary catarrh of the tube I prefer not to throw the solution far into it, and not at all into the cavity, which is so liable to result from ordinary catheterization.

This instrument is not new, so far as injection of the cavity with air is concerned, but, with its general scope the author thinks it may come under the head of "a useful modification of an instrument." As this was used some time before I had heard of Cutter's catheter, and as its construction is essentially different, I have thought best not to make any special allusion to it.

In the cut the spray emerging from the end of the tube is somewhat imperfectly represented.

2. *A Case of Suppurative Inflammation of the Middle Ear, with exfoliation of the whole of the temporal bone, except the lower portion of the external auditory meatus, and the inner portion of the petrous bone. Recovery with slight facial paralysis of the same side.*

John Eddington, aged twenty months, applied to the College clinique on July 26th, 1871, for a discharge from the right ear, which had continued for the last three months, and now accompanied by great pain. There was a pale-looking, boggy swelling over the mastoid region, without distinct signs of fluctuation, which I at once pretty freely incised, without evacuating pus.

In two or three days, however, a purulent process was inaugurated. The child previously had head symptoms which were partially relieved by the operation. A poultice was applied to the wound.

On the 28th, there was considerable cellulitis extending about the auricle and towards the front. Another incision was made, enlarging the old wound upwards and forwards towards the greatest amount of swelling; the bone was felt to be rough and of unequal depth.

Sept. 1st.—Swelling less; child looks much better generally.

Sept. 4th.—The bogginess has extended further upwards, which resulted in the making an incision still further in the same direction. At the upper end of the wound the probe suddenly passed a half inch into the mastoid cells. After the last division of tissue the patient continued to do moderately well for the next three months, although there was great swelling of the tissues in front of the auricle, tempting one to incise, but from the proximity of large vessels it was thought to be an unsafe procedure. Water almost from the first could be passed from the external auditory canal through the aperture made by the incision. Partial paralysis of the muscles of the face of the same side resulted in about six weeks from the commencement of treatment.

About Oct. 1st, a bit of dead bone was first observed behind and a little above the external meatus, at first entirely immovable, but after a week or two was found to be movable, but apparently extending deeply into the side of the head.

After about a month the bone was grasped by a stout pair of forceps and some traction made, but it produced so much hemorrhage, that further effort was desisted from by the advice of Dr. Agnew, who was frequently consulted. The discharge, as might be inferred, was highly offensive, and solutions of carbolic acid and chlorinated soda were freely used.

On Dec. 26th, the mother returned to the hospital with the child, and bringing the sequestrum which had so long resisted removal. It consisted of almost the whole of the temporal bone, except a small part of the lower portion of the external auditory canal, and a little of the inner portion of the petrous bone. The specimen almost surrounds the external meatus, and contains apertures for the three semicircular canals. The specimen shows the corrosive action of the pus it was so long time bathed in. Within two weeks after the removal the facial paralysis very greatly diminished, and the other symptoms showed amelioration.

The mother is directed to gently syringe the ear two or three times a day, sending the water as before from the external canal through the mastoid opening. The latter is diminishing in size. About one month subsequent to the last date, a swelling extended from the old wound downwards towards the neck, which was at once incised, giving permanent relief.

At the present (July, 1872), the child is doing well; there is a little facial paralysis; the aperture through which the sequestrum passed is nearly closed; the discharge is very moderate; general health of the child is good, and it is growing satisfactorily. The question here repeatedly arose as to the propriety of forcibly removing the sequestrum. It was thought that if violence was used in dragging away the piece of bone, a meningitis might be set up, or dangerous hemorrhage would result from the tearing or breaking of some of the larger cerebral vessels. It was consequently decided to not meddle with it, allowing it to be separated by natural processes. It is perhaps worthy of remark that no vertigo or other head symptoms resulted from syringing the ear, although it was done in a thorough manner. The above is thought by the writer to be the largest sequestrum from the ear lately on record.

The case of Dr. Agnew's, where the *whole* of the internal ear was removed by himself, approaches nearer to this in size perhaps than any other recently observed. I had naturally enough watched for an unfavorable prognosis, but up to the present date the patient remains in a fair state of health.

ATHETOSIS.

By WILLIAM A. HAMMOND, M.D.

Professor of Diseases of the Mind and Nervous System, and of Clinical Medicine, in the Bellevue Hospital Medical College, etc.

[Read before the Medical Library and Journal Association, New York.]

There are several diseases, one of the chief manifestations of which is involuntary movement—the consciousness of the patient remaining intact. But that which I am about to bring to the notice of the Association had certainly never been recognized or discriminated from others somewhat similar till the publication of my Treatise on Diseases of the Nervous System, in which work I described it under the name of athetosis, and gave the details of two cases, one of which had come under my personal observation. Since then other cases have been noticed both in this country and in Europe, and the affection has been generally regarded as being entitled to a separate place and as being distinct from any hitherto known to exist as a pathological entity.

The name athetosis is derived from the Greek Ἀθέτος (without fixed position), and is specially applied to designate the chief phenomena of the disease, which consists in an inability to keep the fingers and toes from continued motion. The movements are not disorderly, like those of hysteria and chorea, nor so tremulous as those of paralysis agitans, and the various forms of sclerosis hitherto described. They are regular, and are to some extent under the control of the will—that is, by a strong effort of volition the patient can for a short time prevent them, but they soon reassert them-

selves, notwithstanding his most strenuous endeavors to keep the muscles quiet. Even during sleep the movements continue.

In two of the cases which have come under my notice, and of which I have complete histories, there were in the first instance paroxysms of epileptiform character. In a case which I exhibited to the class of the Bellevue Hospital Medical College last winter there had been no such attacks. They were not observed in Dr. Allbutt's case, nor in two which are now under my care.

The involuntary movements which occur in the fingers and toes are not simple oscillations such as are present in paralysis agitans and sclerosis of the brain and spinal cord, but are slow, and are apparently performed with deliberation. The thumb and little finger are more affected than the other fingers. Owing to the constant exercise, the muscles of the forearm become greatly enlarged and hard, like those of an athlete.

Pain is very generally complained of in the contracting muscles, and in one case caused very great distress.

The sensibility of the skin over the affected parts is lessened, and a feeling of numbness prevails more or less extensively over the side of the body corresponding to the disordered motility. In all other parts it is normal.

The causes of the disease have not been clearly made out as yet. In two of my cases, the patients were intemperate, as was Dr. Hubbard's case, but Dr. Allbutt speaks of his patient as a "temperate woman." Thus far, of the six cases known to me, two have been women.

Relative to the prognosis, no case that has come to my knowledge has been materially benefited by treatment, but death has not yet ensued in any instance. I am disposed to regard the disease as being slow in its progress, but as not being amenable to the action of remedial measures. In each of my own cases there has been a steady advance in the severity of the peculiar symptoms, but the general strength of the patient has not been materially impaired.

If attention be paid to the situation in which the disease is manifested and to the character of the movements, no difficulty will ordinarily be experienced in arriving at a correct diagnosis. Still, it will probably not be considered out of place if I briefly recall the main features of those diseases with which athetosis may possibly be confounded. I am, I must confess, more desirous of doing so, for the reason that such a comparison will show that the disease now under consideration is in reality a distinct affection.

DIFFUSED CEREBRAL SCLEROSIS.

In this disease there are muscular contractions, but they are tonic and permanent, and the affection almost invariably begins in infancy and leads to atrophy or arrest of development of some part of the brain.

MULTIPLE CEREBRAL SCLEROSIS.

Tremor is one of the principal symptoms of this affection, but tremor, though the result of muscular action, differs very essentially from the apparently deliberate and obviously regular movements of athetosis. Besides, tremor never leads to the hypertrophy of muscle so characteristic of athetosis. Moreover, another marked phenomenon of multiple cerebral sclerosis, festination, is absent in athetosis.

CEREBRAL HEMORRHAGE.

In cases of secondary degeneration of the spinal cord, resulting from cerebral hemorrhage, there are often involuntary movements, but they are always the consequence of attempts at voluntary motions, and, in addition, the history of the case will prevent any mistake being made in the diagnosis.

MULTIPLE CEREBRO-SPINAL SCLEROSIS.

In this disease the involuntary movements which are in the nature of tremor make their appearance after paralysis, and are only manifested when voluntary movements are made. There is usually festination. These points are sufficient for diagnosis from athetosis.

CHOREA.

Chorea is generally a disease of childhood. The involuntary movements are irregular, and the disease ordinarily yields readily to treatment. There is no pain, and sensation is not disturbed. The movements in chorea cease during sleep, while those of athetosis continue.

PARALYSIS AGITANS.

In this affection there is tremor, and not entire muscular contraction. There is no pain, no anæsthesia. The tremor usually ceases during sleep, and there are often intermissions during which the patient is comparativly quiet. There is no tendency to the tonic contractions which seem to ensue late in the course of athetosis.

EPILEPSY.

I should never have thought of mentioning this disease in contradistinction to athetosis, were it not that M. Garnier* imagines that athetosis is nothing more than the unilateral epileptiform convulsions, which almost every one has seen, and which are well described by Dr. Hughlings Jackson. Certainly if M. Garnier had ever seen a case of athetosis, or had even carefully read my description of it, he could not possibly have made the mistake of confounding it with any form of epilepsy. To be sure, athetosis often begins with epileptiform convulsions, but so do many other cerebral diseases. The spasms to which he refers are paroxysmal and temporary, while the movements of athetosis are continuous.

Relative to the morbid anatomy and pathology, nothing is known, as no post-mortem examination has yet been made in any case of athetosis. Physiology would, however, indicate the corpus striatum, and perhaps also the optic thalamus, as the seats of morbid process, and the diseased condition is probably sclerosis, which in its turn is the result of slow inflammation.

As regards the treatment, nothing has yet been efficacious in arresting the onward march of the disease, though galvanism has apparently exercised a slight controlling power.

Two cases of this interesting disease are described in my work on Diseases of the Nervous System. One of them occurred in the practice of Dr. Hubbard, of Ashtabula, Ohio, and one in my own practice. This latter patient is here this evening, for examination by the members of the Association.

One other was before my class at the Bellevue Hospital Medical College last winter, and formed the subject of a clinical lecture.

Two others are now private patients of mine. All these cases present the same general features, and are undoubtedly instances of the same disease.

One case† has been reported by Dr. Clifford Allbutt, as occurring in the Leeds General Infirmary, and which

* Dictionnaire Annuel des Progrès des Sciences Médicales. Paris, 1873, p. 42, Art. *Athetose*.

† *Medical Times and Gazette*, January 27, 1872.

this able physician at once recognized as a case of athetosis.

There are thus six cases positively known to me, though my friends, Prof. Gross, of Philadelphia, and Barker, of this city, have informed me that similar cases have occurred in their practice.

Progress of Medical Science.

Wounds Produced by Leaden Bullets.—Dr. Desneux reports a simple method, which he has employed successfully in three cases where he was desirous of determining the presence of lead in gun-shot wounds. Attaching to the end of a flexible sound or probe a pledget of charpie or lint, moistened with a solution of nitric or acetic acid, or simply vinegar, he introduced the instrument into the wound, allowing it to remain there a few minutes. Then removing it, he dipped its extremity in a solution of iodide of potassium. If there had been lead in the wound the yellow color characteristic of the iodide of lead was immediately produced.—*Unione Medicale*, Nov., 1872.

Treatment of Gonorrhœa by the Inhalation of Turpentine.—In a recent article on the "Inhalation of Balsams," Prof. Dittel, of Vienna, reported marked success for this method of treatment in pyelitis and renal catarrh. Prof. Zeissl has pursued the same method in two cases of gonorrhœa, and cured one of them in twenty-five and the other in eighteen days. He believes with Weikart that the anti-blennorrhagic action of these balsams is not due to the ethereal oils but rather to the resinous principles. These latter are always detected in the urine during treatment, while there is no trace of the former.

It was observed in the first case that the oleum ether, terebinth., purchased from the apothecaries, was very slow in showing itself in the urine, and not in sufficient quantity to accomplish the desired result. The oleum ethereum pini, on the other hand, appeared much sooner after inhalation. Accordingly, the latter was chiefly used, or a mixture of it and turpentine. Zeissl believes that the balsams are decidedly curative in their action, and if used should be made to pass through the respiratory system. He believes, however, that the expense of these drugs and the long time required for treatment will preclude them from being generally adopted.—*Allg. Wien. Med. Zeitung*, 16. 1873.

Blood-Poisoning by Septic Matters.—At a recent meeting (*K. K. Gesellsch. der Aerzte*) held on the 16th of last May, in Vienna, Prof. Stricker communicated the results of some experiments which had been made in his laboratory by Drs. Clementi and Thin, to determine the character of septicæmic poisoning. The interest of the report arose from the discussion which Davaine's researches have provoked. This latter experimentalist claimed to have made the following discoveries: After injecting beneath the skin of an animal's neck a single drop of putrid blood the surrounding tissue became extensively infiltrated, and death soon followed with symptoms of septicæmia. The blood of this animal was then employed to inject other animals in a similar way, and was found to be more poisonous than the original putrid blood. A third and fourth animal was then injected, each with the blood of the preceding one, and in this way 24 in all were experimented on. The results seemed to show that the toxic power of the septic material increases by dilution. Stricker undertook to test these statements. He inoculated 25 animals with healthy, 23 with putrid, and 73 with blood diluted by transmission. Of the first series 4 died. Of the second series 11 died. In experiments with diluted blood, where it had passed through 13 different animals, 53 of the 73 died. From this it appeared that even the very small amount of $\frac{1}{1250}$ of a cub. centimetre of poisonous material could cause death when injected hypodermically. Davaine's statement that organisms form in the blood and increase by every transmission was not sustained by investigations. Stricker found numerous colorless bodies in the blood of these animals, but he did not regard them as organisms, but rather as protoplasmic bodies.

The following facts he regards as ascertained:—

1. That transmission greatly increases the injurious and fatal action of putrid matter.

2. That the original disease was infectious, but that through inoculation it became contagious.

3. That, though it be not proven, yet it is probable that the special poison is a living contagion (*contagium animatum*), for such rapid proliferation is only possible in organized material.

4. That the poison is diffusible, and is not destroyed by boiling.—*Allg. Wien. Med. Zeitung*, 20, 1873.

Glycerine of Borax in Facial Erysipelas.—Prof. D. M. Salazar, of the Hospital Nacional, Madrid, reports that he has cured eight cases of facial erysipelas in 48 hours by this remedy. Notwithstanding the rapidity with which the affection disappeared, there were no consecutive pathological affections. In one case, the disease had existed three days before treatment was commenced, and there was bilious vomiting, intense cephalalgia, high fever, inflammation of the entire face, and some phlyctenulæ in the vicinity of the right lower eyelid and the root of the nose. He applied the solution to the diseased parts with a brush and then covered them with a mask of raw cotton. After 24 hours all the symptoms, local and general, were notably diminished, and the next day all the phlyctenulæ had disappeared and desquamation was commencing. All medication was then discontinued, except that a decoction of sambucus and althæa was used as a wash to favor the desquamation. —*El Amfit. Anat. Espan.*, Mar., 1873.

Variations in the Weight of the Body in Children's Diseases.—In France the first observation made to determine the relation between the weight of the body and the activity of a fever were made by Lorain. His attention was chiefly directed to cholera. Thaon has made more extended researches, and has laid down the following rule, which, though true in the main, is certainly faulty in individual instances. He states that "in fevers the weight of the body should be in inverse proportion to the height of the temperature." His results may be summed up as follows:—

1. In typhus he found that during the first two days of the disease or of a new exacerbation the weight increases, the reason of which being that more fluids are taken in than urine excreted. At the same time there is a determination of blood to the skin and various other organs, as Verneuil has shown in all febrile diseases. After the third day the commencing diarrhœa and deficient supply of nutritive material causes loss of weight. When, however, the fever has become stationary the bodily weight frequently remains unchanged. At the time of the slow decadence of the fever the weight diminishes very quickly, because the body is relieved of the products of combustion by the kidneys, skin, and lungs. In abortive typhus the decrease in weight is still more rapid, and may in one day equal one-fifteenth the entire weight of the body.

When the normal temperature is restored the body

continues to lose weight because the products of combustion will continue to be excreted for some further time. During convalescence the weight seldom remains stationary, but usually begins to increase, at first steadily and then more rapidly. The least new complication causes loss of weight. Thus the regular increase of weight is an important diagnostic symptom in normal convalescence.

2. In croupous pneumonia the weight of the body falls during the entire continuance of the fever, but notably when the fever breaks. Then it continues to diminish as long as there is induration of the lung. At the same time and after the fall of the temperature there is an excessive sediment in the urine. These facts have not been observed in catarrhal pneumonia.

3. In small-pox the increase in weight is closely related to the swelling of the skin. Thus it diminishes slowly until the sixth day, on the seventh increases rapidly, reaches its maximum on the twelfth day, and then falls again quickly.

4. In chronic diseases it is important to estimate the weight from time to time, so as to judge of the action of medicines, as cod-liver oil, etc.—*Archiv. de Physiol. Schmidt's Jahrb.*, 2, 1873.

Reinfection in Constitutional Syphilis.—In a recent number of the *Berliner Klin. Wochenschrift* (46, 1872) Köbner has collected 45 cases of syphilitic reinfection, and has added to them eight others which have come under his own observation. He believes thoroughly that syphilitic persons may be liable to fresh infection, but thinks that the proof of it lies in fresh induration, with its proper characteristics, attended by an incubation of several weeks' duration. In several cases the diagnosis could be confirmed by confronting the infecting with the infected person. Among other conclusions the following are drawn from his investigations:—

1. Constitutional syphilis is entirely curable.

2. He does not agree with Diday that there is any definite period, as 22 months, at which time the disease may be eradicated from the system. Nor does he approve of inoculation with syphilitic virus to determine whether the original disease was cured or not.

3. Many of the inveterate or so called tertiary affections, as sarcocele and exostoses, are only to be regarded as local products or the remains of a previously existing disease, and not as symptoms of a general infection, and their significance is not of so much importance for the general system as for the special parts affected. This may explain a fact which is frequently observed, viz.: that sound children may be born of parents who have tertiary syphilis.

4. In more than two-thirds of all these cases where the cure was so complete as to render them liable to a second infection, the treatment was mercurial, and internal preparations were employed rather than the inunction method. The author therefore concludes that mercury is one of the best curative agents in syphilis.—*Schmidt's Jahrb.*, 2, 1873.

Croup.—Dr. W. W. Parker, of Richmond, Va. (*Virginia Clinical Record*), relates a case of croup in which inhalations of lime proved efficacious. The most dense vapor is not at all unpleasant, and can be borne as well as the ordinary atmosphere of a heated room.

Rupture of the Œsophagus.—Dr. James S. Bailey, of Albany, N. Y. (*Phil. Med. Times*), reports the history and post-mortem appearances in a case of rupture of the œsophagus occurring near the cardiac orifice of the stomach, causing collapse and death in twenty-four hours from its occurrence. In this case the accident was probably due to a violent fit of vomiting. The lesion in a sound œsophagus is a rare one. Von Oppolzer reports having seen but one case.

Infantile Uterine Hemorrhage.—Howland Holmes, M.D., of Lexington, Mass. (*Boston Med. & Surg. Journal*), records two cases of this character, which came under his own observation. In one case, on the fifth day after birth, blood flowed from the vagina for a period of about three days, and varied in quantity from one to three drachms each twenty-four hours. No subsequent hemorrhage occurred, and the child is in good health. The second case was a similar one. Both children were of healthy parentage, and weighed at birth 8¼ and 8 pounds respectively.

G. W. Foster, M.D. (*Boston Med. & Surg. Journ.*), also relates a case of this character occurring in a child on the fifth day after birth. The hemorrhage continued in pretty uniform quantity—two or three drachms *per diem* until the eighth day, when it ceased spontaneously. The case acquires especial interest from the fact (in addition to the hemorrhagic tendency of the mother) that a sister of the mother and her child both presented similar phenomena a few days after birth.

Thrombosis of the Cerebral Arteries.—Dr. John A. Lidell, of New York (*Am. Jour. Med. Sciences*, April, 1873), records ten cases of *thrombosis* of the cerebral arteries, which have been met with much less frequently than *embolism* of these arteries.

Old topers are liable to be carried off by thrombosis of the cerebral arteries, because their habit of drinking to excess increases the coagulability of the blood, and, at the same time, renders the cerebral blood-vessels liable to the occurrence of vaso-motor paralysis with dilatation of their calibre, and stagnation of their contents—a circumstance which strongly favors the formation of blood-clot. Thrombosis of the cerebral arteries must, therefore, be looked upon as an occasional consequence of chronic alcoholism.

Hernia.—Thomas Bryant, F.R.C.S., Surg. to Guy's Hospital, in his "Practice of Surgery," remarks that where a hernia can be kept up by a truss, and the patient is likely to remain in a civilized country, where trusses can be obtained, any operation for the radical cure is an unjustifiable one; to risk the life of a patient on a theory of a cure, with the probability that the patient will be rendered less liable to its descent, when a truss has to be worn subsequent to the operation as a matter of safety, is a practical delusion.

Dengue.—W. E. Whitehead, M.D., U. S. A. (*Pacific Med. & Surg. Jour.*), treated recently 127 cases of dengue fever, and is convinced that it is an indigenous yellow fever, running a course precisely similar to the latter, the fever lasting from 48 to 72 hours, with increased temperature in the evening, having a characteristic odor very similar to the transudations in yellow fever. The disease spreads by the action of fomites, and is, he believes, not contagious.

Iodide of Potassium in Syphilitic Skin Diseases.—Dr. McCall Anderson (*Med. News & Library*) lays down the following rules with regard to the employment of iodide of potassium in the treatment of syphilitic skin diseases:—

1st. The longer the interval which has elapsed between the contraction of the syphilitic taint and the development of the eruption, the more confidently may we substitute it for mercury.

2d. If the patient is cachectic, it is, as a rule, to be preferred to mercury, except in recent cases of syphilis, when the mercurial vapor bath, or some such treatment, is more likely to prove successful.

3d. The more extensive the tertiary eruption, the more certain it is to yield to the iodide of potassium; although to this rule there are numerous exceptions.

4th. If there is any tendency to syphilitic disease of the nostrils or neighboring parts, iodide of potassium should be withheld, or given with great caution, for, if it produces coryza, it is very apt to aggravate the morbid condition of the parts.

5th. It should be given in full doses.

It is generally advisable to prescribe it in combination with a bitter, and, in cachectic patients, a little iron is a valuable addition, as in the subjoined prescription: Ammonio-citrate of iron, ʒ iij.; iodide of potassium, ℈ i.; syrup of ginger, ℥ vi.; comp. inf. of gentian, ℥ viij.; water to ℥ xxiv. A table spoonful in a large wine-glassful of water, thrice daily.

Urethral Suppositories in Gonorrhœa and Stricture.—Henry E. Woodbury, M.D., Washington, D. C. (*Phil. Med. Times*, May 3, 1873), uses successfully in the treatment of gonorrhœa and stricture the following remedial agents: Tannin, persulphate of iron, nitrate of silver, and morphia. He considers nitrate of silver and morphia the most efficient from his experience in about 20 cases. The grounds upon which he advocates the use of suppositories in these diseases are as follows: By their use in gonorrhœa the remedy is kept longer in contact with the unduly active mucous membrane than by any other method; while in stricture their lubricating qualities exercise a soothing effect upon the irritated surface, and prevent too rapid healing of the parts.

Ear-Cough.—Dr. J. Solis Cohen, of Phila. (*Phila. Med. Times*, May 3, 1873), has a patient subject to ear-cough—a peculiar spasmodic cough produced by touching any part of the external auditory meatus. Recently he gave him a dose of twenty grains of quinine, which induced a cough exactly similar to the ear cough from external irritation. This cough continued until the influence on the system subsided.

Action of the Intercostal Muscles.—Thomas Dwight, Jr., M.D., Prof. of Anatomy at the Medical School of Maine (*Boston Med. & Surg. Journ.*, May 1, 1873), concludes that the action of the intercostals during ordinary respiration is very slight, if indeed they act otherwise than as ligaments. Both sets, at the upper part of the chest, tend to raise the ribs. Owing to the fixing or drawing down of the lower rib, both sets in the lower part of the chest may tend to draw the ribs downward. By sudden contraction, drawing ribs together, they are muscles of spasmodic expiration. Position, muscular action, disease, deformity, and various slight and undefinable causes, may modify the action of any of them.

Conium in the Treatment of Insanity.—Dr. Daniel H. Kitchen (*Am. Journ. Insanity*, April, 1873), in an excellent article on this subject, speaks of the valuable experiments with *conia* hypodermically administered by Dr. J. W. Burman, of the West Riding Lunatic Asylum.

Twelve cases are related in which this drug was successfully given. His conclusions on its action are as follows: 1st. Muscular relaxation. 2nd. Duration in proportion to dose. 3rd. Physiological effect in proportion to purity of the article used. 4th. The brain is not affected directly by conium. 5th. Pulse and temperature both reduced after a full dose. 6th. A gentle perspiration covers the whole body as soon as the physiological effects are observed. 7th. No appreciable effect on any of the secretions. 8th. Quietness lasts from two to four hours, and then disappears, leaving only a sense of lessened muscular energy. 9th. Conium, not acting on the brain, may safely be given in all febrile diseases. 10th. Conium, when applied to the skin, causes slight redness.

Treatment of Poisoning from Rhus Venenata and Toxicodendron.—James C. White, M.D., Prof. Dermatology in Harvard University (*N. Y. Med. Journ.*, March, 1873), has an important paper "On the Action of Rhus Venenata and Rhus Toxicodendron upon the Human Skin"—the first being popularly known as poison-sumac, poison-dogwood, etc.; the latter, as poison-ivy, poison-vine, etc.

The treatment, when the inflammatory process is well developed, is the selection of applications appropriate to a simple eczema of the same stage. In the great majority of cases he has found black-wash, ℥ j, lime-water, Oj. by far the best application to the affected parts, used as an evaporating lotion upon thin and old linen or cotton cloth, for half an hour to one hour at a time, two or three times a day. He has used in connection with it, to moist or excoriated parts, a powder of oxide of zinc ʒ j., starch ℥ j., or plasters of oxide of zinc or diachylon-ointment, as in the management of ordinary eczema. In the black-wash, possibly, there may be three elements at work: first, the alkali as antidote, if it is of any avail at such periods; second, the action of cold from evaporation upon the local hyperæmia; and third, the astringent effect of the mercurial powder upon the diseased tissues. In all cases of poisoning he has been entirely satisfied with its effects, however extensive in distribution or advanced in development the inflammatory condition of the skin. Only, upon the thickened epidermal coverings of the efflorescences in the palms does it seem ineffectual. For these special manifestations he applies solutions of corrosive sublimate, from one to two grains to the ounce of water, in the same way as the black-wash is used upon the other parts.

Leprosy in the Sandwich Islands.—Samuel Kneeland, M.D., Boston, Mass. (*Boston Med. and Surg. Journ.*, March 6th, 1873), writes concerning the asylum for lepers, which contains about 20 patients, and is situated in the outskirts of the town of Honolulu. The sexes are equally divided, and of all ages from over 50 to 5 or 6 years. Though some of the cases were horrible to look at, he was told that many worse ones had recently been sent to the national asylum on the island of Molokai. The two usually described varieties coexisted in the same person. The first symptom is, in most cases, a tuberculous condition of the skin over the eyes, and on the forehead, cheeks, and chin; the skin looks as if indented with small pits, like those on the top of a thimble. After a while the flexors of the fingers begin to contract, with loss of sensation, gradually creeping up the hands, with loss of the nails, and finally of the phalanges. The skin over the whole body gradually becomes affected, preventing its nutrition, finally destroying the digestive powers, and arresting nutrition. The patients stated that they suffered little or no pain. All ages are affected, and all ranks of society. It is almost inseparably mixed with syphilis, which has raged like wildfire in these islands since the visit of Capt. Cook. No treatment seems of

any avail, except to remedy the syphilitic taint; tonics, stimulants, alteratives, have alike been tried in vain. In regard to its origin, there is a general belief that it was brought from China; it was not known in these islands until 1848, at which time it was said to have been introduced by Chinese. The disease is incurable, and the only remedy is segregation of the affected. The physicians of those islands believe that leprosy is contagious. In the two years ending March 31, 1872, there were at the Kalihi Asylum 202 lepers —124 males and 78 females, including 26 children under 14 years of age; and since its establishment nearly 600 cases have been treated there; most of these, as they grow worse, are sent to the National Asylum on Molokai, but 29 have died at Kalihi. Up to the same date, nearly 600 had been received at Molokai, of whom 200 had died, about 400 remaining there at that date, who, sooner or later, will perish.

Treatment of Erysipelas.—E. Wigglesworth, Jr., M.D. (*Boston Med. and Surg. Jour.*, Feb. 27th, 1873), gives the translation of Dr. V. Kaczorowski's paper on "The Treatment of Erysipelas," published in the *Berliner Klin. Wochenschrift*, Dec. 30th, 1872, in which the author believes that erysipelas is an infectious disease, dependent upon the presence of micrococci, a belief justified by the concurrent testimony of Von Recklinghausen, Waldeyer, Hueter, Klebs, and Orth. His treatment is, on the one hand, to repress the development and the extension of the globular bacteriums, and, on the other, the support of the resisting power of the organism, the activity of the heart, by stimulation and an easily digestible diet.

To obtain the first result, those parts of the skin which are affected already by erysipelas are rubbed, by means of the finger or a little sponge, every three hours with a mixture of carbolic acid and oil of turpentine (1:10), but very gently; the skin of the neighborhood, however, more energetically. The whole district rubbed is then covered with a soft linen compress moistened with concentrated lead-water (1:100), and finally the parts affected already by the disease are again covered, outside of this compress, by thicker linen cloths dipped in ice-water and lightly wrung out, or by a bladder of ice. The external enveloping compresses with ice-water are changed as often as they begin to grow warm. Internally, the patient takes lemonade or a weak solution of chlorate of potassa, to alleviate the accompanying stomato-pharyngitis and prevent diphtheritic depositions, and every one or two hours a teaspoonful of strong wine, to support the action of the heart.

This treatment has been very effective during the last few months in the epidemic which occurred in Posen, Germany. He has never seen a relapse when this treatment has been pursued.

Aniline Poisoning from a Crimson Neck-Handkerchief.—Joseph G. Richardson, M.D., Philadelphia, Pa. (*Philadelphia Medical Times*), reports the case of a farmer, 74 years old, who was severely poisoned by wearing a crimson neck-handkerchief, newly dyed of a crimson color. The microscope demonstrated that the cause of the mischief was aniline.

The treatment consisted in the liberal application upon soft linen rags of slippery-elm mucilage—which he subsequently stated was the first thing that gave him any relief—and in the administration of a mixture composed of Morphiæ acet. gr. i.; Spt. ether nit. f ℥ ss.; Potass. bromid. ℥ i.; Aq. menth. pip. f ℥ iij ss.; Syr. zingiberis, f ℥ ij. Of this a tablespoonful was given every four hours, to allay the pain, fever, and restlessness at night. Under these remedies the disease rapidly yielded, and the patient was cured.

A Compact Uterine Sound.—Henry E. Woodbury, M.D., of Washington, D. C. (*Philadelphia Medical Times*, March 1, 1873), gives a description, with cut, of a compact and convenient uterine sound which may be carried in the pocket. The ordinary sound may be altered to this form, by introducing a joint and slide.

Etiology of Typhoid Fever.—Dr. P. W. Payne, of Franklin, Indiana (*The Clinic*, March 8, 1873), relates five cases of typhoid fever which he believes were referable to the decay of vegetable matter in a well, from which the families of these patients procured their drinking-water. The water had the smell and taste familiar to those who have drank water from an old well, curbed with oak boards or slabs. Sawdust had been used for grading up the lot around the well, and some had drifted into it from time to time.

Poisoning from Camphor.—H. C. Hall, M.D., of Crawfordsville, Iowa (*The Clinic*, March 8, 1873), records a case of poisoning by spirits of camphor, which was taken by an old man, 80 years old, to relieve his diarrhœa. Ipecac. in large doses, combined with 20 grs. of bromide of potassium, were given with success.

Combination for Chronic Diarrhœa.—Rayer (*Union Medicale*, No. 73) advocates the combination of cinchona, charcoal, and bismuth in the management of chronic diarrhœa, in these proportions: Subnitrate of bismuth, ℥ j.; cinchona, yellow, powdered, ℥ ss.; charcoal, vegetable, ℥ i.; M. chart. xx. S. Two or three times daily during the intervals between meals.

Removal of Tongue and Lower Jaw.—William H. Hingston, M.D., of Montreal (*Canada Medical and Surgical Journal*, March, 1873), recently removed the tongue and lower jaw from a man, aged 71 years, for a cancerous mass which involved the whole sublingual region, extended along the lower jaw, from a little below the median line on the right side to the second molar tooth on the left, and eating away, in its progress upwards, the frænum and a considerable portion of the under surface of the tongue. The patient made a quick recovery. He was presented before the Medico-Chirurgical Society of Montreal, about four months after the operation, with no great amount of deformity. Speech was restored to some extent, notwithstanding the entire ablation of the chief organ which gave it articulate utterance.

Cerebro-Spinal Sclerosis.—Stiles Kennedy, M.D., Prof. Anatomy and Physiology, Delaware State College (*Review Medicine and Pharmacy*, March, 1873), thinks that Dr. Hammond's diagnostic lines are too tightly drawn among the scleroses of the nervous system, especially those accompanied by tremor.

He recites Dr. Hammond's definitions of multiple cerebral sclerosis and multiple cerebro-spinal sclerosis, based upon 20 cases, and states that he has failed to discover these distinctions from his experience of 12 cases, three of which he records. From these cases, therefore, he thinks that by accepting the pathology of Dr. H., in this class of cases, the title of *cerebro-spinal sclerosis, involving the hemispheres*, must be added to his nomenclature.

Oxide of Zinc for Night-Sweats.—The most ancient and venerable remedy for night-sweats is aromatic sulphuric acid, in infusion of cinchona, or ser-

pentaria, etc. According to the *Pacific Medical and Surgical Journal*, the best remedy is the following:— ℞ Oxidi zinci, gr. xxx.; Ext. hyoscyami, gr. xv.; M. f. pil. x; Sig.: Take one at bed-time.

Is Salivation Desirable in Syphilitic Iritis?—Dr. A. D. Williams, St. Louis, Mo. (*Med. Archives*, March, 1873), protests against the following remark of Ricord, made in his speech before the British Medical Association, in 1872, on the treatment of syphilis: "There is but one case in which I approve of salivation, and that is where there is iritis. When this occurs, and salivation is brought on, the inflammation of the iris subsides." Dr. Williams expresses his disbelief in even the *desirableness*, much less *necessity*, of salivation in the treatment of specific iritis; so far as he can judge, *mercurialism* is a hindrance to the progress of the cure rather than a benefit. Mercury, even to the extent of salivation, will not prevent the formation of those adhesions between the pupillary margin of the iris and lens, which always interfere materially with vision. "Mercury," he says, "is *necessary* in the treatment, but never to the extent of salivation—certainly not too severe salivation. The local treatment is all-important. This consists in the *energetic* use of atropine in the eye, so as to dilate the pupil to the fullest extent."

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THE MEDICAL RECORD:

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THE PREVENTION OF CHOLERA.

THE appearance of cholera in some portions of this country excites a lively apprehension of an epidemic in some of the larger cities and ports of entry. Such concern on the part of the public, although it is of almost annual occurrence, always partakes of a seriousness which it behooves all health officers to consider. It is always impossible to say when this dreaded scourge may come, but in the present state of sanitary science it is always possible to be prepared for it. During the past twenty-five years we have had all sorts of theories as to the origin and spread of this disease, its march has been accurately mapped out from one country to the other, the dates of its appearance in different localities have been faithfully kept, and no pains have been spared to place upon record all the meteorological phenomena connected with particular epidemics. Although much has been learned from such studies, and many theories have been based upon them, much more remains to be investigated before the medical public can satisfy itself that it has solved many of the questions of the greatest possible importance.

There are some points, however, in connection with the subject of cholera upon which the profession as a whole are pretty well agreed. One of these has reference to the influence which human intercourse has upon the spread of the disease, and another to the peculiar modification of the contagiousness by localizing causes. And these are after all the questions in which the public, alarmed by the probability of another epidemic, are mainly interested. There has been no difficulty in causing any community to accept these doctrines, and there is none of that conventional opposition to the necessary sanitary precautions and hygienic regulations which have been noticed in epidemic visitations of other diseases. The people are only too anxious to have the strictest sanitary regulations adopted, and are willing to aid the health authorities by a consistent obedience.

In connection with the subject of the portability of the disease, the question of quarantine is invested with great interest. Although there are many eminent sanitarians who disbelieve in its efficacy, and although we may not be able to explain certain circumstances connected with the spread of the disease in a locality where rigid quarantine was said to have been enforced, we have no reason to assume that such quarantine was useless. Would it not be as safe to admit that the sanitary regulations were not as perfect as they might have been? At all events, the weight of evidence is altogether on the side of quarantine, and in face of the well-authenticated statements in regard to its great utility, any medical man, or any medical body would take upon itself a grave responsibility in advising against its enforcement. We are convinced that any laxity in the quarantine regulations would be fraught with the gravest consequences, aside from the bad moral effect which such proceedings would have upon the public mind. It is a matter of congratulation for the profession as well as the public, that the present Health Officer of the Port is thoroughly alive to the responsibilities of his office, and is peculiarly fitted to meet any emergency which may arise. In all his endeavors in this direction he will be cordially supported by his brethren and the public at large.

The influence of filth and defective drainage in propagating and inviting the disease is another point upon which sanitarians and the public are alike agreed. The present condition of our streets is, under the circumstances, very fair. In view, however, of the urgent necessity of preparing for an epidemic, there is great room for improvement, for honest, thorough, and untiring efforts on the part of our Police Department. There is something more needed than an occasional resolution from the Health Board to have this or that mass of rubbish removed; something more than a promise to disinfect this and that locality; even something more than cleaning out the cellars in our lower wards.

In regard to the subject of filth and drainage, there are some matters the importance of which the public should be made to appreciate. These have reference to the known tendency of the disease to propagate itself through the agency of the changes which take place in the discharges of choleraic patients, and which changes are aided by defects in drainage. Upon these points, and upon many others which may occur to every practical physician and every sanitarian, the public should be informed. Such information should be furnished by the Health authorities, who by this simple means may do much to conquer the dread of an invasion, and, in case the disease does come, may give the people the best possible chance to check its spread.

REORGANIZATION OF THE HEALTH DEPARTMENT.

We regret to say that our anticipations of improvement in the present Health Department have failed to be realized at the very outset of its career. It does not seem possible for men who have once tasted the intoxicating draught of official patronage to emancipate themselves from its malign influence. The promise that our "reform Mayor" was to infuse a Utopian element of unselfishness, purity, and justice throughout our municipal administration, having been violated at the fountain-head, it was certainly unwise to look for such a spirit in any of the branches proceeding therefrom. Still, as regards the Department whose operations particularly concern us as medical men no less than as citizens, we confess to having indulged expectations founded upon the reputation of two of the commissioners, Chandler and Vanderpoel, without having sufficiently calculated upon the character of the two others. Our hopes were almost confirmed by the principles of action enunciated by the new Board—principles, however, which it seems were destined to be honored quite as much in the breach as in the observance. That peculiar and secret force termed in political parlance "pressure," has evidently caused the fair bubble of "Civil Service Reform" to collapse.

We have a high personal regard for Dr. Day, the gentleman selected to act as Sanitary Superintendent; but to elevate a man confessedly inexperienced in sanitary affairs to a position of such vast responsibility, particularly at so grave a juncture, is an experiment, we are bound to say, which cannot be justified upon any considerations of public welfare. Yet, recognizing his capacity in other fields, we trust that he may not fail in the performance of his new and difficult duties, and that he may finally prove equal to the best of those who have preceded him. His particular good fortune in this emergency is the aid of a good lieutenant, Dr. E. H. Janes, whose recent valuable services we find, with agreeable disappointment, have not been entirely ignored.

Among the Inspectors and Assistant Inspectors we are glad to recognize many familiar names; but in their respective apportionment in the two classes, manifest injustice has been done to old, well-tried, and accomplished officers.

One of the most conscientious and efficient of the old inspectors has suffered the apparent degradation of being reduced to an inferior grade, and others among the old Assistant Inspectors, who were in every respect worthy of being promoted, have simply been retained in their positions to see new men placed over their heads. Here, again, we perceive how "Civil Service Reform" has been obliged to yield to "pressure," as it has been likewise in the discharge of several excellent clerks, simply to create vacancies. It is sufficiently evident, upon an examination of the number of removals and reappointments, that an agreement was entered into by which one-half of the force was to be sacrificed under any circumstances to the exigencies of the occasion.

The deposition of Dr. Russel, the Registrar, is only consistent with the general inconsistency described. The entire profession of the city, except, perhaps, Dr. Stephen Smith, desired his retention, and almost all of our distinguished physicians gave expression to that feeling, but were astonished and indignant at the indifference shown to their wishes in a matter of such interest to Sanitary Science.

We had hoped that the Registrar elect had retired upon laurels previously won in that capacity years ago; that in writing his tedious reports for the public prints he had at last relieved his great responsibilities to the public, and satisfied his ambition as an authority on sanitary matters; but in this, too, we were mistaken. We are, however, assured upon the authority of the *New York Times*—Stephen Smith's constant eulogist and mouth-piece—that Dr. Harris's return to the position of Registrar is likely to result in a decided improvement. The *Times* is here unusually vague in expression, but we sincerely trust that it foreshadows some possible improvement upon Harris the Registrar of old, as we all remember him.

In truth, we cannot congratulate either the profession or the public upon the measures adopted in reorganizing the executive bureaus of the Health Department. Political expediency and compromise have been but poorly concealed under the gown of Justice. The new and well-disposed and right-minded element in the Board, instead of neutralizing the one pernicious spirit that remained from the old, has failed to successfully encounter so insidious an influence. The alchemist may learn to transmute the baser metals into gold, or to convert the noxious gas into the pure diamond, but he may never hope to accomplish the metamorphosis in human character, motive, and action of evil into good.

THE PROPOSED REMOVAL OF BELLEVUE HOSPITAL, N. Y.

The recent passage of the law to provide for the selection of a site for, and the erection of, a new city prison, has brought up a subject for discussion interesting to the public generally, and the profession particularly. By the terms of the Act, a commission, consisting of the Mayor, the Comptroller, and the President of the Board of Aldermen, is to decide upon a suitable site for the building within ninety days from the passage of the said act. As might be supposed, the commission have already entered upon their labors. The attention of the members has been turned to the eligibility of the grounds of Bellevue Hospital for such a purpose. The subject has been under such serious consideration that the buildings have been examined with that end in view. Of course no idea is seriously entertained of turning the hospital, as such, into a prison, the only question with the commission being the removal of the buildings, and the construction of a

model jail in their place. It is contended by such as are in favor of such a project, that the buildings are wholly unfit for their present purposes; that their long use as hospitals has made them hot-beds for pyæmia and erysipelas. There is so much said by the daily press *pro* and *con* upon this subject, that a committee of the Board of Aldermen have undertaken to investigate the matter, and the Commissioners of Charities and Correction have directed that a report be made by a committee of the Medical Board. The latter report, the object of which is to prove that Bellevue Hospital is to all intents and purposes in excellent condition, has been published. Although we must admit that there are a great many circumstances which explain an apparent increased mortality—circumstances connected with the class of patients treated, their condition when received, the large number brought there with incurable diseases simply to die, and the number of severe accidents admitted—still there is no doubt that the buildings need to be improved, a matter which is by no means an impossibility. But whatever we may say of the buildings cannot be said of the site. Bellevue Hospital can improve its buildings, but not its situation. It is needed just where it is, and in no other place can it better serve the interests of charity and science.

THE POLICE SURGICAL SYSTEM.

THE new charter for the city provides for the appointment of twenty-two police surgeons. Instead of complying strictly with the provisions of the said charter, the Police Commissioners have hit upon the novel plan of appointing four medical gentlemen in each precinct, each one of whom is expected, on the call of the officer of the district, to attend upon members of the police force, and upon injured citizens at police-stations for a stipulated fee of three dollars a visit, and five dollars for a night call. This plan is open to many objections, and cannot fail to embarrass the commissioners and the surgeons employed.

First, there is good reason to doubt the legality of such appointments; secondly, there is a great liability on the part of such as may have the power of calling in medical aid, of exercising gross partiality to one or two of the medical men in a precinct. Thirdly, the surgeons are not subject to any of the regulations which are necessary for the prompt compliance with orders from superiors in office,—a circumstance of the greatest importance to the discipline of every police force. Fourthly, the expenses of such attendance must be greatly in excess of the old system. The commissioners must, however, try the experiment before they can be satisfied.

DICTIONARY OF MEDICAL TERMS.—The new edition of "Dictionary of Medical Terms," by MM. Robin and Littré, has been laid before the *Académie des Sciences.*

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 12, 1873.

DR. ERSKINE MASON, President, in the Chair.

RESECTION OF ELBOW-JOINT.

DR. C. K. BRIDDON presented a specimen of resection, with the following history:—

The boy Cavanagh, from whom this specimen was removed, came under my observation in the fall of 1872. He was a delicate, undersized child, of ten years, without history of hereditary predisposition to articular disease, and with good sanitary antecedents up to the time when he met with an accident, which was regarded as trivial at the time of its occurrence, in the early part of June; at that time he fell down a flight of three steps, and made no complaint of being hurt until three days afterwards, when he called his mother's attention to his left elbow, which was slightly swollen and painful. These conditions gradually increased, and in about three weeks an opening formed spontaneously behind the olecranon, and continued discharging for about a month, when it closed. When the abscess opened the pains ceased entirely, and the functions of the joint were in a measure restored. Shortly before seeing me, he had been suffering from an exacerbation of pain, occasioned by an inflammatory swelling on the inside of the forearm. At this time the boy's condition was as follows: his left upper extremity was wasted, the wasting being most marked in the flexors and extensors of the arm; the elbow was the seat of a fusiform swelling, the largest diameter of which was situated immediately across the articulation; the limb was maintained in a condition of flexion, at about a right angle, but admitting of considerable alteration, without eliciting manifestations of pain; there was no heat or discoloration about the joint proper; but two inches below, on the inner aspect of the forearm, was a small inflammatory swelling which, on being incised, gave exit to about two drachms of pus.

The limb was put in an immovable apparatus; he was recommended the best dietary the circumstances of his parents would permit, and was directed to take cod-liver oil and ferruginous tonics.

In December I examined the parts again; the opening on the inner aspect of the forearm had degenerated into a sinus, which led to carious bone, and by a little manipulation a probe introduced through it could be made to traverse the joint; there was preternatural mobility, admitting of considerable lateral displacement of the articular extremities, but such movements gave no sensation of crepitus. I regarded the joint as irretrievably disorganized, but determined to try the effects of more prolonged rest until his general condition was improved—advising perseverance with the means that had been used before, and the reapplication of immovable apparatus.

In the early part of the present year, finding his general condition much improved, and that of the joint as before, I advised resection of the articulation, and the operation was done on the 29th of January, in the presence of Drs. Krackowizer, John Howe, and George Thompson. The proceeding was easily accomplished, through a single medio-posterior incision; little blood was lost, no ligatures were required, the integuments were brought into apposition by a few sutures, and the limb was put up in a splint which

could be placed at any angle, and which left the joint entirely exposed to view.

Examination of Parts Removed.—Section of lower end of humerus traversed the condyles three-quarters of an inch above the lowest articular surface. Section of ulna one-quarter of an inch in advance of tip of coronoid process; of the radius, quarter of an inch below its head; the cut surfaces were all sound; the articular surfaces were almost entirely divested of cartilage, and covered with granulation tissue; at the base of the coronoid process, on its inner side, was a sinus passing through the osseous tissue, and leading into the articulation; the synovial membrane was everywhere in a condition of pulpy degeneration.

Remarks.—Results obtained from excision of this joint vary. In some cases the member is little better than a flail, over which the unfortunate owner has little or no control. In such cases the shafts of the bone have been too much encroached on, too much has been removed. In another class of cases anchylosis results either from sparing too much in the operation, or neglect in enforcing passive motion at an early period; but in the majority of cases we are justified in anticipating a more or less complete restoration of the function of the limb, and, what is equally satisfactory, in the operations made on children, growth of the part is not much interfered with. In connection with this latter statement, I would refer to some observations made before the Medical Section of a late session of the French Association for the Advancement of Science, by Ollier of Lyons. The Doctor supports the theory of the peripheric growth in bones. In 1867 he had shown that irritation of the diaphysis of a long bone excites elongation of the bone; irritation of the conjugate cartilages arrests growth, and that not by the more rapid soldering of the epiphysis, but by disturbance of the process of ossification. A more important observation made by the learned Professor, and one more directly bearing upon the subject I am considering, is the fact he insists upon, that the conjugate cartilages play unequal parts in the development of bones. The humerus grows especially through the upper conjugate cartilage, the ulna and cubitus through the lower cartilage, so that the bones entering into the composition of the elbow-joint have only limited influence in the development of the arm. It is just the reverse with the knee and the bones which form it, and practical surgeons are well aware that resections of the knee are particularly liable to be followed by arrest of growth as regards length, especially if the epiphysal line is encroached on.

Stated Meeting, March 26, 1873.

DR. ERSKINE MASON, President, in the Chair.

DR. POST presented a specimen, with the following history:—

NECROSIS OF LOWER JAW.

Eliza McGowan, aged 7 years, was brought to my clinic January 16th, 1873. She had a great swelling on the left side of her face, evidently of an inflammatory character, with a sinus behind the ramus of the jaw. On opening the mouth, dead bone could be seen and felt, corresponding with the left side of the lower jaw. The swelling commenced last July, when she had a molar tooth extracted.

I introduced into the mouth a chiropodist's forceps and seized the denuded bone, and with a twisting motion, applied with some force, I succeeded in extracting this large portion of dead bone, including the whole mass of the jaw from the left temporo-maxillary articulation to the space between the anterior and posterior bicuspid teeth.

A week after the operation the inflammatory swelling had subsided, and I found that new bony matter had been formed along the base and ramus of the jaw, so as to complete the outlines of the bone, except the alveolar portion.

Nothing is known as to the cause of the necrosis in this case. The patient had not taken mercury, and had not been exposed to the fumes of phosphorus.

STONE IN THE BLADDER—LITHOTOMY.

CASE II.—*March* 15, 1873. A. B., æt. 14 years, was brought to me by his father, who stated that he had suffered from symptoms of vesical irritation for two years past, and that during the last six months his sufferings at the time of passing urine, and immediately afterwards, had been very severe. I sounded him, and readily detected the presence of a stone. I could not, however, feel it with a finger introduced into the rectum. The patient's general health had not become seriously impaired.

March 18th.—I performed bilateral lithotomy, with the assistance of Drs. Hinton, Minor, Leale, Maguire, etc., anæsthesia having been induced by the inhalation of the vapor of ether. After incising the neck of the bladder, I introduced my finger and readily felt the stone. I seized the stone with forceps, and applied considerable tractile force, but did not succeed in extracting the stone. I then introduced through the wound, into the bladder, Sims's rectum dilator, and, turning the screw, I stretched the wound, after which I introduced the forceps and extracted the stone without the slightest difficulty. The calculus weighed 186 grains, and was of an ovoidal shape, and very rough on the surface. It was analyzed by Mr. Francis Buck, and was found to consist of uric acid within and of phosphate of lime on the surface. The patient's condition seemed very comfortable when he recovered from the anæsthesia.

March 19, 1 P.M.—I found the patient crying out with pain, which he referred to the hypogastric region, which was tender on pressure. His face was flushed, his surface warm, and his pulse 120 and full. There was no tympanitic distention of the abdomen. The folded sheet under the patient was wet with urine, which dribbled from the wound. The wound was free from swelling and presented a healthy appearance.

I ordered a solution of sulphate of morphia, gr. j. to ℥j.; two teaspoonfuls to be given immediately, and one teaspoonful every hour afterwards, until there should be a decided mitigation of pain. I also directed a warm cataplasm of flax-seed over the hypogastric region.

7 P.M.—I found that the patient had taken only one dose of the anodyne, after which he had slept, and there had been no return of the pain. His face continued flushed, pulse 150, and softer and smaller than in the morning. Ordered two drops of tincture of veratrum viride every two hours.

March 20, 1 P.M.—Patient more comfortable; pulse 125; skin moist; no desire for food; calls frequently for drink; has taken no nourishment since the operation but a little milk and beef-tea. Continue veratrum viride. Increase amount of nourishment, if he can be induced to take it.

March 21, 2 P.M.—Had return of pain last night, but was promptly relieved by one teaspoonful of solution of morphia. He appears better this morning; he lies quiet, his skin is cool, and face no longer flushed. Pulse 102; has some appetite; wound looks well; urine continues to dribble away.

March 22.—Continued improvement; pulse 96.

March 26.—Still improving slowly; pulse 90; no urine has yet flowed through the natural channel.

Stated Meeting, April 9, 1873.

Dr. Erskine Mason, President, in the Chair.

CANCROID OF ORBIT.

Dr. Knapp presented a tumor of the orbit removed by operation from a patient who presented himself four months ago with an epithelial growth in the lachrymal region and surrounding parts. The patient was not seen again until two days before the meeting, when he informed Dr. Knapp that six weeks previously he suffered a severe attack of inflammation in the growth, since which time the disease had progressed to a remarkable degree. When examined by Dr. Knapp, it was found that the entire left cornea had sloughed and that the disease had made progress in all directions. The patient was importunate for an operation; and, appreciating the tendency of the disease to spread over the face and be attended with all the horrible sequelæ so often witnessed in such cases, the appeal could not be withstood. Dr. Sands saw the case, and, although the difficulty of removing the disease was very great, coincided in the expediency of the operation. The operation was accordingly performed. A vertical section was made through the eyelids, and the eyeball enucleated in the usual way. The growth, which involved the inner wall of the orbit, the antrum, the floor of the orbit, and root of nose, was finally dissected out and removed. The hemorrhage was considerable, but was very soon arrested by plugging the cavity with sponges, which were still *in situ* at the time of reporting the case.

On examination the growth was found to be a true example of cancroid; the bulk of it was hard like scirrhus, scattered throughout the substance of which were evidences of rapid growth in the preponderance of cell elements, the softened and vascular condition of this particular part.

The prognosis was of course bad, a return of the disease being apprehended in a short time.

In conclusion, he remarked that he was not in favor of using chloride of zinc in these cases, first, because its action could not always be limited; secondly, because whatever can be done with the zinc can be accomplished with the knife.

Dr. Mason was of the same opinion, and referred to three cases in which he had employed it—two cases of mammary cancer, one case of cancer of orbit—without the slightest benefit.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 17th, 1873.

Dr. Austin Flint, President, in the Chair.

IRREGULAR UTERINE ACTION IN LABOR.

Dr. William T. Lusk read a paper on "The Etiology and Indications for Treatment of Irregular Uterine Action during Labor," of which the following is an abstract:—

To avoid confusion he proposed using the term "labor-pains" in the sense of uterine contractions, a distinction made necessary in our language by the frequency with which it is stated that women are having strong pains, when upon examination there is only a feeble measure of uterine contraction, the word "pains" evidently here signifying nothing more than an unduly severe amount of physical suffering.

With regard to precipitate labors as a consequence of excessive uterine action, are they not to be regarded with apprehension? Precipitate labors are not very uncommon at Bellevue Hospital. He has never noticed anything peculiarly unfavorable in their action.

It is to the violent straining that the accidents enumerated are really attributable. They occur in women who possess an undue degree of reflex irritability, which impels them to excessive use of the diaphragm and abdominal muscles. These cases do not call for bleeding, but for the subcutaneous injection of morphia, or best of all, the production of complete anæsthesia by chloroform, so as to suspend the action of the voluntary muscles.

However, revolutionary as it may seem, there is tolerably good ground for questioning the pretty generally accepted opinion that in the independent action of the circular, oblique, and longitudinal layers of muscular fibres which may be demonstrated in the pregnant uterus, the key to the abnormal forms of uterine action is furnished us. The existence of such layers is not of course denied; their importance has unquestionably been greatly exaggerated by the desire of the anatomist to answer the questions of the obstetrician.

There is strong *à priori* reason to doubt whether the uterus during labor ever contracts except in its totality. The evidence to the contrary in the case of the so-called strictures is more apparent than real.

Pains which may be good enough to accomplish the organic changes of the cervix in multiparæ, may be utterly inadequate for the same purpose in primiparæ. It is losing sight of this comparative difference which has led observers to commonly attribute to the rigid os of the primiparæ the blame that properly attaches to the relatively insufficient uterine action.

In the treatment of this affection there is no occasion to resort to bleeding, to tartar emetic, or to plastering the cervix with belladonna ointment. In the course of time the tonic contraction generally disappears of itself. But while it lasts the patient's condition is one of acute suffering. To allay this suffering, the physician is frequently called upon to use morphia either by the mouth or hypodermically.

Opiates frequently accomplish wonders in one of two ways. Owing to the prolongation of the labor and its attendant pain, the patient's nervous energies have become exhausted. The arrest of the pain enables the woman to sleep, and with the recuperation of power that comes upon awakening, good pains follow which bring the labor to a happy termination.

In other cases, after the employment of opium, or the administration of an anæsthetic, the parts apparently relax, and an acceleration of labor follows. Opium, when it produces this effect, has been regarded as an oxytocic. Now in these cases we have first the arrest of pain, then the occurrence of regular uterine action, and as a consequence the rigid os yields. It is possible that the beneficial effect of the anodyne or anæsthetic is due directly to their quieting action upon the spinal nerves. The uterus derives its motor nerves chiefly from the sympathetic system. When from disease of the spinal cord there is total paralysis of the lower extremities and bladder, labor has been known to proceed undisturbed.

It has been surmised that the nerves of the uterus, derived from the cerebro-spinal system, possess inhibitory properties. If it be true, it readily explains how severe pain may suspend uterine action, and how the tran-

quillizing of pain would restore to the motor nerves their full energy.

In cases where anodynes and anæsthetics fail, favorable results may occur from rupture of the membranes.

On some occasions we find, on examination, the cervix partially dilated, a segment of the head presenting, but the cervix continues hard and unyielding. The patient is noisy, and screams out with every pain. In a number of instances he has had an opportunity to demonstrate in the presence of members of the Bellevue Hospital staff the speedy disappearance of all rigidity, with complete dilatation, by simply asking the woman to hold her breath, and reinforce the uterine pains by the action of the auxiliary muscles. With his finger upon the cervix he has known a very few pains, thus reinforced, to put an end to a long period of delay and suffering.

In all cases where we desire to quickly overcome rigidity, or where other methods have proved ineffectual, we possess a certain means in the use of the Barnes Dilator, which acts most beneficially by both the mechanical pressure it exercises on the cervix, and by stimulating the dormant energies of the uterus.

The speaker then laid down the distinction between good pains and those of an opposite character, which, he thought, was not quite so simple as might at first appear. Good pains have nothing to do with mere frequency, or the suffering of which they are the source.

It is often difficult, toward the close of pregnancy, to distinguish between colic pains due to fecal accumulation, or the presence of gases in the stomach and intestines—troubles to which pregnant women are specially disposed—and uterine contractions of a painful character.

In normal labors the pulse becomes more rapid at the beginning of each pain, and continues to increase in frequency until the pain has reached its acme, when a gradual declination follows. But sometimes labor is attended by marked febrile symptoms. There exists not only rapidity of pulse during the intervals of the pains, but a continuous elevation of temperature. Now if at the same time the uterine contractions are the source of extraordinary suffering, there is strong reason for suspecting that the labor is complicated by inflammatory conditions of the organs concerned in parturition.

In the treatment of a pathological weakness of pains, one or two courses are open to the obstetrician: he may either effect delivery by resorting to a judiciously selected operative procedure, or by applying the whip and the spur he may seek to compel the uterus to perform its proper function.

Both from training and inclination the author prefers in most, if not all cases, to adopt the first alternative. Yet he is not quite ready to deny that ergot may be profitably employed at even an early stage of labor. He has seen small doses of ergotine given in the Prague Hospital, with the view to awaken such a degree of uterine activity as would suffice to bring about the moulding of the head in a moderately contracted pelvis. The ordinary formula consisted of: ℞. Ergotine, ʒj.; tinc. cinnamomi, syr. āā ℥j. M. et sig.: Teaspoonful every 3 or 4 hours.

In these cases it appeared to produce good results, and certainly did no harm, unless perhaps by leading to the postponement of a more vigorous line of treatment.

He mentioned a plan for supplementing weak pains that has been long employed by practitioners, for which two rules have been more recently formulated by Kristeller, consisting of regulated pressure made through the abdominal walls upon the fundus uteri. This method, to which Kristeller has given the name of *expressio fœtus*, in some cases enables us to bring about delivery without the employment of an extractive force. Yet the number of such cases is limited, and its principal application will always, it is likely, be found as a support to other operative procedures belonging to midwifery. Those who are not accustomed to resort to this plan, will be astonished upon trial to find how much a scientifically applied *vis a tergo* facilitates forceps deliveries, and extraction following versions.

Dr. Fordyce Barker remarked as follows:—My relations to the author of this paper would forbid me as a matter of taste from expressing my opinion with regard to it in any logical form, or in the way of a logical criticism, yet I will take the liberty to make a few criticisms upon some particular points without entering upon a general discussion of the paper.

The first criticism which I will make is in regard to the use of the term uterine pain as synonymous with uterine contraction. Practically there is a very decided difference between them, and I think that the author in his paper did not carry out his proposed idea at all, for he made the term uterine pain equivalent to uterine contraction. Now there are cases where uterine contractions go on and a complete result is attained without true uterine pain. There are cases where complete dilatation of the cervix is accomplished, and the patient is utterly unconscious of pain throughout the entire process, but the uterine contractions have resulted in their proper and due effects. This is true also in some cases, although more rare, where uterine contractions take place more completely with the second stage of labor.

I think that a great deal of the discussion in medicine has come from the loose use of terms. But to pass to more practical points in connection with the paper aside from the use of terms, and in relation to the subject of irregular contraction, it perhaps might not be unprofitable to just glance at the progress which has been made in our physiological appreciation of this subject.

It has been the regret of my life that I had not the early and complete training as the author has shown, and as many of the younger members now present have had. With this deficiency in my early training, because at that time the opportunities were not afforded for such thorough physiological study, I find myself obliged to analyze at length before I can correctly appreciate cases, and learn facts and ideas. This progress in physiological study is illustrated by glancing at the views of standard authors upon this subject of irregular uterine contraction.

Mercereau, who was a great man in his day, referred to this irregular contraction as being almost exclusively due to plethora and congestion, and the treatment which he recommended was bleeding, and sometimes anodynes, warm baths, etc. At that time nothing was known of the physiology of the nervous system as applied to the explanation of such irregular manifestations.

Then came Denman, the great English author, who wrote a book which every one who practises midwifery at the present day can read with profit. He was, however, entirely ignorant of the physiology of the nervous system as we understand it now, and he asserts in the most positive terms that there is no pain that occurs in labor but what is useful. His whole object while writing upon this topic was to show the impropriety of resorting to any measures to arrest pain. His

teaching utterly leads to the neglect of many of those methods of treatment which, at the present day, not only relieve suffering and exhaustion, but save many hours of labor and absolutely save life.

Perhaps as historical reminiscence, I may be permitted to refer to a case of considerable interest, one which, at the time of its occurrence, made a great sensation, and which has been quoted by writers and teachers from that day to this. I refer to the case of Princess Charlotte, only daughter of George IV., whose life, I believe, was sacrificed by the application of principles which were in accordance with the medical doctrines of that day, but whose life and the life of her child would have been saved had she been attended by any practitioner now present.

The case was referred to as an instance where death was the result of a concealed hæmorrhage, and teachers have been in the habit of referring to the romance of the story, that Sir Richard Croft, who was the Princess' attending physician, to avoid the censure and mortification attending the result of the case, placed a pistol to his head and shot himself.

What are the facts relative to this case as they have recently been published in the memoirs of Baron ——? The Princess was taken in labor, it being in her first child, on the 4th of Nov., 1817. Previous to her labor she was kept upon a low diet, laxatives being frequently given, and she was bled several times in addition, so as to prevent inflammation and plethora. She was taken in at 5 o'clock, the first symptoms being rupture of the membranes and discharge of the liquor amnii. The labor continued through the day and night of Tuesday, although all these authors state distinctly that the discharge became greenish and fetid; but because the pains continued regular in their recurrence, although feeble, no advance being made, yet no question was raised with regard to the use of instruments or the adoption of any measures for the immediate delivery of the woman. At 7 o'clock Wednesday night she gave birth to a dead child. Every effort possible was made to resuscitate it, but it never breathed. For some time the Princess seemed perfectly well. The placenta did not come away, and hour-glass contraction occurred; the placenta was then forcibly delivered, and as the memorandum says, with the escape of but little blood. The Princess remained quiet for some time and had a little sleep, but about 12 o'clock she awoke, appeared restless, tossed about, was a little delirious, and the physicians in attendance began to give her stimulants. She died at 1 o'clock on Thursday morning. It will be noticed that this lady was not delivered for 54 hours after her labor began; although for 30 hours before, the signs of the death of the fœtus were quite distinct, and the mother was in an exhausted condition; the idea of instruments was not suggested to the minds of her attendants, and in fact their use would have been improper, in accordance with the doctrines of that day.

At the post-mortem examination ℥ iv. of bloody serum were found in the pericardium, no other disease being found, or abnormal appearance except a few ounces of fluid was found in the uterus, varying according to writers from ten to twenty ounces. It was very evident that she did not die from post-partum hemorrhage. She probably did die from pulmonary embolism, which took place between 12 and 1 o'clock the night of her death. It is quite evident that here was a case in which death resulted from an ignorance of true physiological principles. In all probability had the Princess Charlotte been managed as any intelligent man would manage her at the present day, her own life and that of the child would have been saved. In that event the Duke of —— would probably never have been George IV., Queen Victoria would never have been queen of England, and it is impossible to estimate how immensely important as influencing, not dynasties merely, but nationalities and peoples in England, France and Belgium, because political existence at that time involved the fate of all Europe, were the operations of the medical attendants of the Princess Charlotte, for all rested upon the knowledge and skill of the profession of that day. With our knowledge and the resources at our hands, in all human probability the result would have been entirely different.

But to return to the paper itself: I will make a few remarks first in relation to the stricture of the neck of the uterus. Stricture at this point was defined by Dewees as occurring in two forms. One form in which the stricture is at the os externum from the irregular contraction of the uterus preventing the proper dilatation, and the other form where we have the stricture of the cervix uteri after the head has passed, preventing the shoulders from passing through, constituting the contraction of the neck of the uterus about the neck of the child. Now it seems to me that there is a decided difference between feeble, irregular uterine contractions having reference to the first stage of labor, and dilatation of the cervix and the feeble uterine contractions having reference to the second stage of labor and the expulsion of the contents of the uterus. I think they are due to different causes, and that there is a difference as to the appropriate treatment for each condition. I think that physiologists will tell us that a different class of nerves are involved in the process connected with the dilatation of the cervix uteri, from that involved in the process of the expulsion of the contents of the uterus.

I have not seen a case of hour-glass contraction for more than twenty years in my own cases. I have seen it in consultation, and then it has occurred from just those causes which the author in his paper has mentioned, and which are defined for the first time.

In relation to the stricture of the cervix uteri, I will add another cause which was not mentioned, and that is from paralysis of the muscles of that part due to the uterine contractions having forced the head below the symphysis pubis, and as the labor goes on the anterior lip becomes pressed between the fœtal head and the symphysis, and so paralyzes those tissues that it prevents normal contraction.

When I find this condition, I think labor is very frequently shortened by hours, by introducing one or two fingers and pushing the lip up and holding it up until the head has escaped from it.

With regard to stricture of the perinæum, I believe there is an enormous difference in the nervous susceptibility of different patients. I used to see cases, before the use of anæsthetics, of excessive spasmodic rigidity of the perinæum, which now never occurs in my own practice. I think in most cases this is one very much of the same sort of paralysis of the muscles which I referred to as causing paralysis of the anterior lip. In this case the pressure is from the head upon the perinæum, the mucous membrane of the vagina very frequently becomes dry, and the reflex action is such as to give rise to excessive uterine pain, without any results. I find that these cases are most satisfactorily managed and the labor most rapidly completed, by placing the woman fully under the influence of an anæsthetic and introducing, it may be, a large quantity of some unctuous substance, such as lard, cold cream, or sweet-oil into the vagina.

In regard to ergot and *expressio fœtus*, I have only to say that I have had no practical experience as re-

gards the value of ergot in increasing uterine pain and regular power. I have been for some time determined in my own time to make a trial of it after the manner recommended in this paper. It seems to me to be based upon sound philosophical reasoning. I have resorted to expressio fœtus for years, long before it was brought out by Kristellar, supposing that almost everybody was familiar with it. During the last hours of labor I am in the habit of making firm pressure over the uterus, and I believe that I have shortened many cases of labor materially by adopting this measure.

Dr. A. C. Post stated that the practice of expressio fœtus was one which from time immemorial has been practised by the Tartars of Central Asia. It is their custom to select the strongest man in the tribe to embrace the woman in his arms and by this mechanical pressure to facilitate the progress of the labor.

Dr. Garrish remarked upon points of practical importance.

Dr. Hubbard said that he had derived the most benefit in making pressure upon the abdominal walls by the use of a roller bandage. In one case the pain had entirely ceased from some cause which could not be made out, but by placing a bandage about the patient tightly, the pains commenced and the woman was soon delivered.

With reference to the use of ergot he has not, of late years, been in its favor. He has been in the habit of using opium for an oxytoxic effect, according to the plan recommended by Dr. Barnes.

The Academy then adjourned.

Stated Meeting, May 15th, 1873.

Dr. S. S. Purple, Vice-President, in the Chair.

MORTALITY OF VARIOUS STATES OF THE UNION.

Prof. J. C. Dalton was appointed orator for 1873.

Dr. Charles P. Russel read a valuable paper on "Mortality in the various States of the Union," and concluded with a tabulated statement of death-rates during the past year in the principal American and foreign cities—derived from official sources. He was largely indebted for the foreign figures presented to the courtesy of American consuls in their respective posts. The figures of American, Italian, and British cities were generally furnished him by officers in charge of statistical bureaus. This table is the most comprehensive one of the kind ever presented.

The highest death-rate in the United States, according to the table, was given by Memphis, viz.: 46.6 in each 1,000 inhabitants; in Savannah, the mortality was equal to 39.2 in each 1,000 inhabitants; in Vicksburg, 36.5; in Troy, 34; in Hoboken, 32.9; in New York, 32.6; in Newark, 31.6; in New Orleans, 30.6; and in Boston, 30.5. These were the highest figures of mortality. The other principal cities furnished the following death-rates: Philadelphia, 26.1; Brooklyn, 28.1; St. Louis, 20.1; Chicago, 27.6; Baltimore, 25.1; Cincinnati, 20.5; San Francisco, 17.2.

Of the larger British cities, Dublin yielded the greatest death-rate, viz.: 29.9 in each 1,000 inhabitants; that of Manchester being 28.6; of Glasgow, 28.4; of Leeds, 27.9; and of Liverpool, 27.1. The death-rate of London was as low as 21.4—less than that of any other important British city.

On the continent of Europe, the highest death-rate was noticed in Prague, Bohemia, viz.: the enormous one of 48.9 in each 1,000 people. It was excessive in Cadiz, Spain, where it was equal to 44.7; in Munich it was 41.8; in Rome, 36.7; in Naples, 35.7; in Florence, 35.1; in Athens, 33; in Berlin, a city with little less population than New York, it was 32.3, or nearly equal to our own; in Bologna, Italy, it was 32.2; and in Vienna, Genoa, Stockholm, and Nice, 31.8. The large mortality of the last-mentioned city is owing to the many deaths of invalid strangers sojourning there. High death-rates prevailed also in Havre, Rotterdam, Leghorn, Venice, and Milan, ranging between 31 and 30. In Paris it was stated as only 21.1—but all deaths by strangers and travellers are there excluded.

The lowest mortality was given by the Swiss cities in Zurich, Geneva, and Basle—13.9, 19.4, and 20.9 respectively—and Christiania, Norway, 20.7. Algiers, Africa, gave a death-rate of 33.6. That of the Indian cities of Bombay and Calcutta was by no means high, being 29.2 and 25. In Madras, however, it was 35. In Montreal it was 37.3, and in Havana 35.1. The highest known death-rate prevailed in Valparaiso, Chili, viz.: 66.9 in each 1,000 inhabitants. This was the only South American city heard from.

Dr. W. M. Chamberlain made some "Remarks upon the Principles involved in the Mechanical Treatment of Uterine Displacements," as a novelty, without urging it, as he had employed it in only four or five cases of anteflexion, and retroflexion or retroversion, but with success. The paper will appear in a future issue.

Dr. Peaslee said that Dr. Russel's paper was, of course, more accurate and comprehensive than any other previously published, and the statistics would be accepted as facts.

In regard to the subject of Dr. Chamberlain's paper, he stated that it was a pretty extensive one, but the principle advocated was the one for adoption; the instrument was a new variety of instrument already employed. He referred to a paper which was read some ten or fifteen years since at the meeting of the State Medical Society, in which from 120 to 150 varieties of pessaries were presented; since that time nothing had been introduced which exhibited a new principle. The principle of the prop was the one to be adopted in the construction of pessaries, and if the vaginal wall was not long enough, the lower end of the prop should be behind the symphysis pubis. The danger from distention of the vagina, on the introduction of instruments, had been overdrawn, but it was not often necessary to do it if the prop was applied correctly. He would not hesitate, however, to distend the vagina if the patient was relieved thereby.

Instruments generally were made too strong, and consequently defeated their object. They should be light, and, as far as shape is concerned, should be adapted to particular cases. One patient could wear a circular instrument, while another would require it to be elongated, the former being unbearable. The gynæcologist should know what the possibilities are, and be guided accordingly. Pessaries should be made of a perfectly smooth rubber tube, but, so far as his experience goes, makers have not as yet made them to suit him. Dr. Chamberlain's instrument would answer well in cases of sufficient tonicity of the vagina.

The Academy then adjourned.

MEDICAL LIBRARY AND JOURNAL ASSOCIATION OF NEW YORK.

Stated Reunion, May 22, 1873.

Dr. John C. Peters, President, in the Chair.

DIAGNOSIS OF PELVIC HÆMATOCELE.

Dr. Charles Carroll Lee made "Remarks upon the Diagnosis of Pelvic Hæmatocele." The following were his conclusions:—

"Hæmatocele sometimes, and perhaps often, occurs without recognition. For, if it be liable to be overlooked when the effusion has been so great as to cause profound shock and exhaustion to the patient, the lighter forms of the malady are much more apt to escape detection.

"Its occurrence, as a possibility, should be borne in mind whenever we meet with cases of obscure shock and sudden prostration in women; and if to this feature be added severe abdominal or pelvic pain and retching, or persistent vomiting, without other evident cause, its existence will be highly probable. It is not necessary that the rectal or vaginal tumor should exist at the beginning of the disease; when the patient is supine and the blood diffused throughout the pelvic cavity this is not likely to occur immediately, although its absence renders an absolute diagnosis impossible.

"In milder cases the conditions with which it is most likely to be confused are pelvic cellulitis and pelvic peritonitis; I say nothing of uterine displacements, as very little skill or knowledge is requisite to discriminate between these conditions and the tumor caused by hæmatocele; the uterine sound alone is necessary.

"As regards cellulitis, although the inflammation is as sudden as the onset of hæmatocele, the swelling it produces is never sudden; moreover, the swelling is generally lateral at first, in or about the broad ligament on either side, while in hæmatocele it is believed to be always in the posterior cul-de-sac, although Courty states that Chassaignac had charge of a case where the effusion was entirely confined to the anterior cul-de-sac. In cellulitis the tumefaction is hard and resistant from the first, while in hæmatocele it is at first soft and fluctuating, and only hardens as the contents gradually coagulate—the contrary being here, also, true of cellulitis when the swelling gradually softens, especially when it terminates in abscess.

"In *pelvic peritonitis* the differential diagnosis is perhaps more difficult, as the pain is here not only sudden, but sometimes quite severe; but ordinarily it is certainly less acute than in hæmatocele, and never produces collapse or fainting, which is so strongly indicative of internal hemorrhage. Like cellulitis, it commonly occurs after parturition, or follows operations upon the uterus, while hæmatocele is most common after an arrested menstruation, although it may occur at any period. The pelvic swelling that follows peritonitis is less notable in size than an ordinary hæmatocele; it forms very slowly, and is hard and "boggy," without elasticity or the feeling of fluctuation. When pelvic peritonitis occurs during menstruation, as occasionally happens, the discharge is suddenly arrested or suppressed; whereas hæmatocele occurring at such a period does not necessarily arrest the flow.

"Both cellulitis and pelvic peritonitis are believed to be always associated with functional activity of the generative organs; while traumatic hæmatocele may evidently occur at any time, without regard to either menstruation or parturition.

"Although it has not been my intention to discuss either the prognosis or treatment of hæmatocele, it may be stated in general terms that the prognosis is good, and the best treatment a judiciously expectant one—by rest, opium, gallic acid, and the local application of cold if the hemorrhage be severe, in the first stage; in the second, tonics and hot injections into the vagina or bowel, limiting evacuation of the contents of the tumor to such cases only as threaten to cause septicæmia."

Dr. Peaslee remarked that the subject was of great interest, especially in its diagnostic features. He referred to the signs of hæmatocele, pelvic cellulitis, and ovarian cyst, and considered the distinguishing of the latter from hæmatocele ordinarily an easy matter; but he spoke of a complicated case which he saw in consultation with Dr. Mitchell, of Brooklyn, in which this gentleman gave up the idea of hæmatocele and fell back upon pelvic cellulitis, or ovarian cyst. The patient died, and an ovarian tumor was found adherent to everything it touched; the cyst held about three pints, of which half was pus and the rest was common viscid fluid. The speaker learned from this case that an ovarian cyst may increase within forty-eight hours to one of the size related.

The Association adjourned.

Correspondence.

A PRIZE BY THE EMPRESS OF GERMANY.

Berlin, *May 1st*, 1873.

To the Editor of the Medical Record.

Sir.—May I request the favor of your granting a place in the columns of your journal to the enclosed Circular, which opens a literary competition on subjects deeply interesting to all those who would fain alleviate, to the best of their powers, the miseries of war?

I have the honor to be, Sir,
Your obedient servant,
von Holleben.
Chairman of the Central Committee of the German Associations for the relief of wounded and sick soldiers in time of war.

Circular.

For the purpose of advancing the cause of humanity, under the symbol of the red cross in time of peace, Her Majesty the German Empress, upon the occasion of the World's Exhibition at Vienna, has deigned to offer two prizes in the sum of 2000 thalers each for the following two essays:—

No. 1, for the best manual of technical surgery in war.

No. 2, for the best treatise on the Geneva Convention.

And in addition thereto, Her Majesty has granted a like sum, both for awarding premiums to articles to be used for sanitary purposes in the field, exhibited at Vienna, and for purchasing the same.

The undersigned Central Committee, charged with the duty of carrying out Her Majesty's designs, request all persons desirous of competing for the prizes, to observe strictly the following rules deemed essential in making the award:—

The manual referred to under No. 1, in describing the different methods of dressing wounds and applying bandages, and the surgical operations occurring in war, must concisely and briefly state the present standpoint of technical surgery in war, so as to form an indispensable companion and practical assistance for every army surgeon.

The essay under No. 2 must contain a history of the Geneva Convention, and a statement and examination of the results experienced in carrying it into effect, together with suggestions for its further development by additions and modifications.

The prize essays, written in German, French or English, must be sent to the undersigned Central Committee not later than the 15th May, 1874.

They must be without signature, but distinguished by a motto and accompanied by a sealed envelope, reproducing this motto on the outside, and containing within the name and residence of the author.

On the 18th of October, 1874, the birthday of His Imperial Highness the Crown Prince of the German Empire, the prizes will be awarded to the essays to which they shall have been adjudged by a jury composed of three members, designated severally by the Austrian Patriotic Aid Association for wounded soldiers and the widows and orphans of soldiers at Vienna, by the International Committee at Geneva and the undersigned Central Committee.

The author will have the right to publish the essay which shall obtain the prize, but if within a period of six months from and after the date of the award he shall not have availed himself of such right, it will revert to the undersigned Central Committee.

THE CENTRAL COMMITTEE OF THE GERMAN ASSOCIATIONS FOR THE RELIEF OF WOUNDED AND SICK SOLDIERS IN TIME OF WAR.

VON HOLLEBEN.

BERLIN, *May* 1, 1873.

TREATMENT OF CHOLERA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—The time is approaching when it will become necessary for physicians in this vicinity to consider what course of treatment they will adopt in cases of cholera. For it is true that up to the time of the epidemic of 1866 there was nothing like unanimity on the subject. And the diversity of opinion has given opportunity to flippant and thoughtless physicians to speak of cholera in terms very commonly used by the laity, as a disease about which the medical profession is quite in the dark.

There is no occasion for any such admission, if we keep in mind the true history, which is, that cholera is almost necessarily fatal when the second (algid) stage is fully established; that it is useless to expect that any method can be discovered which will restore the patient from that condition of collapse; but that in the first stage, before the circulation is materially affected, treatment is very efficacious, and we have a prospect of saving a very large proportion of our patients.

What, then, is the course to be pursued? An experience with cholera in 1849, '54 and '66, in the last of which epidemics I had charge of the Brooklyn Cholera Hospital, has satisfied me that the method which promises a great degree of success is the administration of calomel, in frequently repeated doses, until the discharges lose their characteristic watery appearance and become green or brown, and have a fæcal odor. In the *New York Medical Journal* for December, 1866, I published a concise report of the epidemic of that year in Brooklyn, with my hospital experience. After trial of various methods during the first two weeks of the continuance of the hospital, the administration of calomel was adopted as the regular treatment, and daily observation showed it to have a very powerful and favorable influence upon the disease. The whole mortality was, of course, very great; for most of the patients were brought in in the stage of collapse, and past all help; but of thirteen patients entering in the first stage twelve were treated exclusively with calomel, and recovered; the only one entering in that stage who was not treated with calomel, died; fifty-seven entered in collapse, of whom twenty-three were treated with calomel, and of these, six recovered, three exhibited partial reaction, and four passed out of collapse and died in the third stage.

Such an experience makes it probable that if this method were adopted in private practice, where patients are often seen at the very outset, or before the algid condition has been reached, the mortality of the disease would be very materially lessened. It is a treatment which has found favor to some extent before, but has not been pursued so perseveringly, or perhaps on so well-defined principles, as to lead to its establishment as a well-recognized method. It has the support of the ablest and wisest of this generation of physicians, the deeply-lamented Niemeyer.

My practice was to give it in ten-grain doses, repeated every hour until colored discharges were produced; and their appearance was always attended with relief of the epigastric distress and other symptoms; with improvement in the pulse, and restoration of warmth in cases which were running into the stage of collapse. Niemeyer says: "I have had the best results from cold compresses frequently applied to the abdomen, and from the administration of calomel in doses of one grain every hour."

In 1849, I treated a number of cases with venesection, after the method then in repute with the East India surgeons. I recollect two cases of recovery from the stage of collapse, in one of which there was no radial pulse; on opening the vein no blood flowed, but by continually stripping the arm from the wrist to the elbow, it came drop by drop, and after awhile gradually increased, so that, after half an hour's effort, there was a moderate stream, and warmth began to return to the surface. The essential pathology of cholera consists in a remarkable change in the blood, by which its red corpuscles lose their power of oxygenation, and there is consequently a general arrest of the circulation. The first blood that flows, when a vein is opened in the second stage of the disease, is dark and viscid, and the red corpuscles are found to be disorganized. Now it is highly probable that calomel, acting primarily on the portal circulation through the intestinal mucous membrane, relieves secondarily the congestion of the systemic capillaries, thereby arresting the destruction of the red corpuscles, while it eliminates the choleraic poison by the bowels.

There are other points in the treatment of cholera which are of great importance, and which are generally recognized by the medical profession. In this brief communication I will only refer to them, so far as to say that all nourishment in the first or second stage is hurtful, as no food can be digested; that opium is useless, unless at the very outset; that alcohol has no effect in restoring the warmth; that external heat is useless, and the warm bath very injurious, and friction of no avail; but that as near an approach to repose as it is possible to attain, with cold affusion, and moderate draughts of water or bits of ice, with sinapisms to relieve the cramps, with the continued use of calomel, will give us the best results we can obtain.

WM. HENRY THAYER, M.D.

BROOKLYN, June 9, 1873.

THE STATE MEDICAL SOCIETY OF NEW JERSEY.—The 107th meeting of the State Medical Society of New Jersey was held May 29th and 30th at Mount Holly. The next annual meeting will be held at Long Branch.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 5, 1873, to June 18, 1873.

SMITH, A. K., Surgeon. Assigned to duty as Chief Officer, District of New Mexico. S. O. 84, Department of the Missouri, June 4, 1873.

ALEXANDER, C. T., Surgeon. Relieved from duty in Department of the Missouri, to proceed to St. Louis, Missouri, and on arrival, report by letter to the Surgeon-General. S. O. 113, A. G. O., June 5, 1873.

GRAY, C. C., Surgeon. Assigned to duty as Post Surgeon, at Fort Clark, Texas. S. O. 96, Department of Texas, May 26, 1873.

TOWN, F. L., Surgeon. Granted leave of absence for 30 days, with condition to make satisfactory arrangement for medical attendance during his absence. S. O. 104, Department of the East, June 5, 1873.

FRYER, B. E., Surgeon. Assigned to duty at Fort Wood, N. Y. H. S. O. 106, Department of the East, June 7, 1873.

BREWER, JNO. W., Assistant Surgeon. Assigned to temporary duty at Fort McHenry, Maryland. S. O. 106, C. S., Department of the East.

MILLER, G. McC., Asst. Surgeon. Relieved from duty in the Department of the South, and ordered to Department of Arizona. S. O. 113, C. S., A. G. O.

LIPPINCOTT, H., Asst. Surgeon. Relieved from duty in Department of the South, and ordered to Department of Arizona. S. O. 120, A. G. O., June 16, 1873.

KOERPER, E. A., Asst. Surgeon. Granted leave of absence for 30 days. S. O. 112, A. G. O., June 4, 1873.

MEACHAM, FRANK, Asst. Surgeon. Granted leave of absence for 30 days. S. O. 118, A. G. O., June 12, 1873.

YEOMANS, A. A., Asst. Surgeon. When relieved by Asst. Surgeon Matthews, to comply with orders received from War Department. S. O. 106, C. S., Department of the East.

DELANY, A., Asst. Surgeon. To report in person to the Commanding General, Department of the South, for assignment. S. O. 120, C. S., A. G. O.

PATZKI, J. H. Asst. Surgeon. Granted leave of absence for 4 months, with permission to go beyond sea. S. O. 115, A. G. O., June 7, 1873.

MATTHEWS, W., Asst. Surgeon. Assigned to duty at Fort Sullivan, Me. S. O. 106, C. S., Department of the East.

KING, WM. H., Asst. Surgeon. Relieved from duty in Department of the Missouri and ordered to Department of the South. S. O. 113, C. S., A. G. O.

BYRNE, C. B., Asst. Surgeon. Relieved from duty in Department of the Columbia, to proceed to Baltimore, Md., and on arrival, report by letter to the Surgeon-General. S. O. 113, C. S., A. G. O.

Medical Items and News.

DR. JAMES L. BANKS has been appointed attending physician to the Presbyterian Hospital, N. Y., *vice* Dr. E. C. Seguin, resigned.

HEALTH BOARD APPOINTMENTS.—Dr. W. De Forrest Day, Sanitary Superintendent, Dr. Elisha Harris, Registrar of Records.

CHOLERA has made its appearance in Nashville, Memphis, Cincinnati, Paducah, and Washington. The number of deaths reported up to June 21st, were as follows:—Nashville, 253; Memphis, 71; Cincinnati, 14; and Washington, 1; Paducah, 5.

YELLOW FEVER.—The report of the existence of yellow fever cases in Brooklyn is without foundation.

BROOKLYN BOARD OF HEALTH.—The new Health Board have appointed the following officials: *Sanitary Superintendent*, Dr. B. A. Segur; *Registrar*, Dr. James Watt.

DR. JAMES L. BROWN.—The following resolutions were presented by a committee of the New York Obstetrical Society, appointed at the meeting subsequent to the death of Dr. James L. Brown, to express the sense of the Society on the sudden loss of its esteemed President:—

Whereas, It has pleased Divine Providence to take from our midst our beloved President, Dr. James L. Brown, therefore be it

Resolved, That we deeply mourn our loss in being thus suddenly deprived of an able and devoted President, whose wise counsels and judicious labors were always of the highest value to this Society.

Resolved, That by the death of Dr. Brown we have lost a friend and associate whose warmest interest and hearty co-operation have been with us since the very foundation of our Society, and whose unceasing and zealous exertions have largely contributed to its present position and success.

Resolved, That in the removal in the midst of an active career of one so qualified to adorn its ranks, the medical profession of this city has sustained a severe loss.

Resolved, That we tender our heartfelt sympathy to the bereaved family of Dr Brown.

Resolved, That a copy of these resolutions be sent to the family of Dr. Brown, and that they be published in the medical journals of this city.

Signed { T. G. THOMAS, E. R. PEASLEE.

CHAS. S. WARD, *Secretary*.

ST. PETERSBURG ACADEMY OF MEDICINE.—Lidia Rodelrena, a wealthy Russian lady, has just presented to the St. Petersburg Academy of Medicine $40,000, to endow a department for the medical instruction of women.

LAPHAM.—Dr. Increase A. Lapham, of Milwaukee, has been appointed Chief Geologist of Wisconsin.

NEW YORK DERMATOLOGICAL SOCIETY.—At the annual meeting of this Society, held recently, the following officers were elected for the ensuing year: *President*, Dr. R. W. Taylor; *Secretary*, Dr. Lucius D. Bulkley; *Treasurer*, Dr. F. Le Roy Satterlee; *Executive Committee*, President and Secretary *ex-officio*, and Drs. F. D. Weisse, F. P. Foster, and T. A. McBride.

THE QUEENS COUNTY MEDICAL SOCIETY, N. Y.—The annual meeting of this Society was held May 27th, 1873, and the following officers were elected: *President*, Dr. Edwin Webb, of Hempstead; *Vice-President*, Dr. S. Hendrickson, of Jamaica; *Secretary and Treasurer*, Dr. Wm. D. Wood, of Jamaica; *Censors*, Drs. Ault Muller, Davidson, and Taylor; *Delegate to the State Medical Society*, Dr. Ornton: *Delegate to the Kings County Medical Society*, Dr. P. Y. Frye; *Delegates to the State Medical Association*, Drs. Whiting and Woodend.

SIGNS OF FRACTURE OF THE BASE OF THE SKULL.—Dr. R. M. Hodges (Boston *Med. and Surg. Jour.* May

15th, 1873) has an instructive clinical lecture on "Bloody, watery, or other discharges from the ears, nose, or mouth, as signs of fracture of the base of the skull."

THE STATE MEDICAL SOCIETY OF CALIFORNIA.—The officers of this Society for the present year are: *President*, T. H. Pinkerton, M.D.; *Vice-Presidents*, Drs. J. M. Browne, C. A. Kilpatrick, F. W. Hatch, H. M. Biggs; *Permanent Secretary*, W. T. Wythe; *Assistant Secretaries*, Drs. A. B. Caldwell and T. Ross; *Treasurer*, J. E. Oatman, M.D.; *Board of Censors*, Drs. G. G. Tyrell, G. W. Graves, E. A. Stockton, L. Robinson, and W. S. Thorne.

The late meeting was held in Sacramento; the next annual session will be held in San Francisco.

ST. THOMAS' HOSPITAL, of London, enjoys the princely income per annum of £30,000.

DEATH OF NOTED ENGLISH PHYSICIANS.—Dr. Bence Jones, of London, Senior Physician of St. George's Hospital, the pupil of Liebig, friend and biographer of Faraday, and Honorary Secretary to the Royal Institution of Great Britain, died recently. Dr. Tyler Smith, of London, died June 20th.

SUSPENSION OF MEDICAL JOURNALS.—The Journal of the Gynæcological Society, the Michigan University Medical Journal, and the American Psychological Journal are no more.

CINCINNATI ACADEMY OF MEDICINE.—The officers of this Association for 1873 are as follows: *President*, John H. Tate, M.D.; *First Vice-President*, A. C. Kemper, M.D.; *Second Vice-President*, Byron Stanton, M.D.; *Recording Secretary*, J. W. Hadlock, M.D.; *Corresponding Secretary*, N. P. Dandridge, M.D.; *Treasurer*, W. T. Brown, M.D.; *Librarian*, C. S. Muscroft, M.D.; *Trustees*, Drs. W. P. Thornton, J. J. Quinn, and C. S. Muscroft.

KENTUCKY STATE MEDICAL SOCIETY.—At the annual meeting of this Society, held recently, the following officers were elected for the ensuing year: *President*, Dr. J. W. Thompson, of Paducah; *First Vice-President*, Dr. J. M. Keller, of Louisville; *Second Vice-President*, Dr. R. M. Fairley, of Hopkinsville; *Recording Secretary*, Dr. J. A. Larrabee, of Louisville; *Corresponding Secretary*, Dr. J. D. Jackson, of Danville; *Treasurer*, Dr. L. B. Todd, of Lexington; *Librarian*, Dr. D. S. Reynolds, of Louisville.

The place of the next annual meeting is Shelbyville, on the first Tuesday of April, 1874.

TENNESSEE STATE MEDICAL SOCIETY.—At the late annual meeting of this Society the following officers for 1873 were elected: *President*, Dr. C. C. Abernethy, of Pulaski; *Vice-Presidents*, Drs. Woodson, of Gallatin, Wright, of Chattanooga, and Pearce, of Union City; *Corresponding Secretary*, Dr. Curry, of Nashville; *Recording Secretary and Treasurer*, Dr. J. D. Plunkett, of Nashville.

The next meeting will be held at Chattanooga on the first Tuesday in April, 1874.

THE PRESENTATION OF A VALUABLE LIBRARY.—The Minister of Public Instruction in France has purchased the elegant ancient and modern collection of books, belonging to the late Dr. Daremberg, and presented it to the Library of the Faculty of Medicine of Paris.

MENTAL ALIENATION.—Dr. Beaugrand says that, notwithstanding the various anxieties which beset the career of medical men, mental alienation is rare among them; and he gives the following table of Parchappe: artists, 9.60 per cent.; lawyers, 8.41 per cent.; clergymen, 4.15 per cent.; medical men, 3.85 per cent.

NEW YORK ACADEMY OF MEDICINE.—At a stated meeting of the Academy, held May 1st, 1873, Dr. Austin Flint, President, in the chair, Dr. C. E. Brown-Séquard made remarks on "The Importance of Frequent Auscultation and Percussion of the Chest in Cases of Organic Brain Disease." He cited cases, occurring in animals and man, showing that injuries to the brain will produce emphysema, pneumonia, and diseases of the liver, stomach, and kidney. Pneumonia is oftener produced when the injury is on the right side of the brain, rather than on the left side.

He referred to 188 tuberculous cases, compiled from various sources, in which the origin of the disease was traced to inflammation of the brain, showing it to be not of accidental occurrence.

His conclusions were as follows: In animals which have received brain-injury, inflammation of the lungs may follow. The injury, in this manner, causes death. In man the same effect is shown by actual experiment. The life of man may be saved, after injury to the brain, by early auscultation and percussion.

Dr. A. C. Post inquired if there was not a strong reciprocal action of diseases of the lung upon the brain.

The speaker replied that the mechanism of diseases of the brain upon the lungs is different from the action of the lungs upon the brain, but it was quite possible that Dr. Post's query would prove to be true. It was a subject demanding further investigation, and he would be happy to furnish any member of the Academy who might wish to make further researches some facts which he had already collected.

MASSACHUSETTS BOARD OF HEALTH.—The Fourth Annual Report of the State Board of Health for 1872, compiled by George Derby, M.D., Secretary, contains 473 pages of interesting and valuable reports on the following subjects: "Sewerage; Sewage; The Pollution of Streams; The Water-Supply of Towns," by Drs. Wm. Ripley Nichols and Geo. Derby; "Additional Analysis of Evidence as to the Use and Abuse of Intoxicating Liquors," by P. Emory Aldrich; "Character of Substances used for Flavoring Articles of Food and Drink," by Henry K. Oliver, M.D.; "Drainage for Health," by Henry F. French; "Infant Mortality," by Edward Jarvis, M.D.; "The Food of the People of Mass.," by Geo. Derby, M.D.; "The Adulteration of Milk," by Dr. A. H. Nichols and Prof. J. F. Babcock; "Causes or Antecedents of Consumption," by Henry I. Bowditch, M.D.; "The Adulterations and Impurities of Food," by Prof. H. B. Hill; "The Homes of the Poor in our Cities," by Frank W. Draper, M.D.; "Report of the Butcher's Slaughtering and Melting Association;" and Report on "Small-Pox in Mass. during Thirteen Months ending with Feb. 1st, 1873." The members of the Board are as follows: Drs. H. I. Bowditch, Warren Sawyer, Richard Frothingham, R. T. Davis, P. Emory Aldrich, G. V. Fox, Geo. Derby.

INTESTINAL OCCLUSION.—Dr. W. O. Johnson (Harv.) (*Boston Med. and Surg. Jour.*, April 24th, 1873) gives a *resumé* and analysis of the quasi recent and late papers on "Intestinal Occlusion," by S. Foster Haven, Jr., M.D.; A. P. Duchaussoy, of Paris; Wm. Brinton, M.D., of London; Dr. Edouard Henoch, of Berlin, C. Hilton Fagge, M.D., of London, and Drs. Heiberg, Kuettner, W. Gruber, Treitz, etc.

Original Lectures.

CLINICAL LECTURES ON PUERPERAL FEVER.

DELIVERED AT BELLEVUE HOSPITAL,

BY FORDYCE BARKER, M.D.,

PROFESSOR OF CLINICAL MIDWIFERY AND DISEASES OF WOMEN IN BELLEVUE HOSPITAL MEDICAL COLLEGE.

(Reported phonographically for the MEDICAL RECORD.)

LECTURE II.

THE following clinical history was taken from the note-book of Dr. Early, House Physician:—

Miss S——, æt. 24. German domestic; well-developed woman. Always been healthy. Nothing of special notice abnormally during pregnancy. Taken with labor Feb. 1, 1873.

Feb. 2.—27 hours after the commencement of labor, forceps were applied. Perinæum was slightly ruptured, and two sutures were applied. At 10.30 P.M., patient was comfortable.

Feb. 3.—Pulse, 80; temp. 100°. P.M.: pulse, 96; temp. 103¼°. No pain; milk appearing.

Feb. 4.—A.M.: Respiration, 24; pulse, 106; temp. 104⅓°. Had pain in abdomen all night. Thirsty. Ordered solution of morphia (U. S.) ℥ ii., and tr. aconite (Fleming's), ♏ii. every hour, also 3 pills for bowels. P.M.: Respiration, 28; pulse, 108; temp. 103½°. Pain less; slight tenderness over abdomen. The pills having had no effect, an injection was ordered. Given sol. morph. (U. S.) ℥ ii. and tr. aconite, ♏ii. every 2 hours.

Feb. 5.—Respiration, 18; pulse, 100; temp. 101°. Has some pain in right iliac fossa, also tenderness. Ordered morphine.

Feb. 6.—Respiration, 22; pulse, 108; temp. 101⅘°. Complains of pain, and there is some tenderness over abdomen. Ordered morphine.

Feb. 7.—Respiration, 32; pulse, 20; temp. 102⅔°. Has diarrhœa and vomiting. Matter vomited greenish and watery. Marked tenderness over right side; very nervous. Ord. tr. aconite (Fleming's) ♏ii. every hour. sol. morph. (U. S.) ℥ iiss. 9 P.M.: Has complained of pain all the evening. Ord. sol. morph. (U. S.) ℥ iii. 11 P.M.: Pain continues. Cannot sleep. Ord. sol. morph. (U. S.) ℥ iii.

Feb. 8.—A.M.: Pulse very rapid; temp. 102°. Skin hot and dry. Both cheeks red, swollen and painful. Tongue dry. Ord. tr. aconite (F.) ♏ii. every 2 hours; Quiniæ sulphat. grs. x. t.i.v. Liq. plumbi et opii to face. Brandy and extra diet. No diarrhœa this morning. P.M.: Respiration, 38; pulse, 128; temp. 102⅔°. Now complains of great pain in head and abdomen, and there is some abdominal tenderness. Tongue clean, but very red. Vomited this afternoon. Skin hot and dry. Ord. sol. morph. (U. S.) ℥ iii. at once. Whiskey during night, and aconite and quiniæ continued. 11 P.M.: Sol. morph. ℥ss. on account of severity of pain.

Feb. 9.—3 A.M.: Sol. morph. (U. S.), ℥ss. 9.30 A.M.: Respiration, 24; pulse, 128; temp. 102⅘°. Slight abdominal tenderness and slight pain, and patient feels better; slight tympanitis; catheterization; vaginal douche; face better; aconite, quiniæ and brandy continued. 7.30 P.M.: Respiration, 28; pulse, 140; temp. 101½°. Pain and tenderness over abdomen; skin warm and moist. Treatment continued.

Feb. 10.—9.30 A.M.: Much pain; abdomen tender and very tympanitic; feels very bad. Ord. injection for bowels and continued treatment. 2.45 P.M.: Respiration, 60; pulse, 140; temp. 103½°. Respiration sighing. Morphine and brandy. 5 P.M.: Respiration, 12; pulse, 142; temp. 103¾°. 9 P.M.: Respiration, 42; pulse, 132; temp. 104⅗°. Sol. morph. (Magendie's) ♏ xv. hypodermically. 11 P.M.: Respiration sighing, 48; temp. 105°; pulse unable to count. Complains of some pain in head, back, and abdomen; delirious; no vomiting. Died Feb. 11, 1.45 A.M.

Autopsy, Feb. 11, by Dr. Delafield. Brain not examined; heart normal; lungs normal; both pleura covered with pus and fibrin; liver rather large and soft; spleen large and soft; kidneys normal. Peritoneum, venous congestion, coated with fibrin and pus, small amount of purulent serum in cavity. *Uterus* well contracted; peritoneal surface congested and coated with pus and fibrin. Internal surface and walls normal; in right side, some of the sinuses at insertion of lateral ligament full of puriform fluid. Bladder normal. Pelvic sub-peritoneal tissue normal.

To-day, gentlemen, I will call your attention to a few points in connection with the general symptoms of puerperal fever. We are accustomed in this hospital to have cards placed above each patient, upon which are kept a special record of the respiration, circulation, and temperature. These essential symptoms are those which first indicate any striking abnormal departure from a healthy condition; and the characteristic features of the puerperal fever, wherever it occurs, whether associated with peritoneal symptoms, or phlebitis, or with lesions of the thoracic organs, or all these morbid conditions combined, or without any of them, are a morbid increase in temperature, increase in frequency of pulse, as well as change in character, and increased frequency of the respiration. Any puerperal woman who shows a temperature over 100°, a pulse over 100 to the minute, and a respiration over 24 to the minute, must be considered as being in abnormal condition; and these phenomena oftentimes appear before any other symptoms which will attract attention.

If you will study the best works you have access to, you will probably be led to believe that puerperal fever is almost invariably ushered in by a chill or repeated chills; but please do not accept what they have to say upon this point, for the fact in the case is that chills may or may not be present. Some of our most fatal cases are entirely free from chills throughout the whole course of the disease. None of the patients we have had in this hospital this winter have had chills with any degree of prominence. Pain and abdominal tenderness are unreliable symptoms in this disease. The pain, even where the peritoneal lesion is the most prominent one, has no special proportion to the extent of the lesion, for it is very often absent or almost absent, or a very inferior symptom, where post-mortem may reveal the most extensive effusions of plastic and sero-purulent material. Tympanitis also is not characteristic; and with regard to all three of these symptoms, the history of the case attached to these remarks affords a very fair illustration. The absence of pain, however, must not be regarded as evidence of the absence of the peritonitis, and it is important to avoid this error.

For the fluctuations in the pulse, temperature, and respiration, the clinical record of the case read in your hearing also affords a most faithful and satisfactory illustration. While the variations may be markedly different in different cases, yet the record of this single case will, if carefully studied, afford an exponent of

the liabilities of the disease. There is another feature of the disease to which I wish to call your special attention. This is one of the most treacherous diseases you will ever be called upon to treat. The patient may be in the most dangerous condition when the symptoms would lead you to suppose that she is better. The patient herself may say that she is better; there may be less pain, if pain has been prominently present, there may be less tympanitis, fever may have subsided, and desire for food returned, and even the patient may have a good appetite just before death.

Since our last meeting there have appeared in the hospital three cases of this disease. One died within an hour after admission; another who appeared to be convalescing until one day ago, when symptoms of an appalling character made their appearance, and in all probability the patient will die; the other one is at present improving, and also is expected to recover. Her temperature is 101½°; pulse, 72; and respiration, 18. There is considerable effusion into the abdominal cavity, but under the influence of opium, stimulants, etc., she at present is doing very well. This is a disease, therefore, which requires the most careful watching, and it will not answer to suspend treatment simply because the symptoms have ceased.

We now pass on to the consideration of the question of treatment.

When the peritoneal symptoms are the leading features, there is some pain, but the general features of the case are very different from those of purely inflammatory peritonitis. The limbs are usually extended, respiration abdominal as well as thoracic, usually some pain, but not intense, some tenderness upon pressure, but nothing like that which occurs in the idiopathic form. For the control of the pain, such doses of opium may be used as will hold it in complete subjection; but it does not usually require such free administration of this drug as in connection with the idiopathic cases. It will be noticed, by the clinical record read, that varying doses of the U. S. solution of morphine were used at somewhat varying intervals sufficient to allay all irritation from the pain. For the control of the nervous irritation which is especially manifest with peritoneal complications, we have no agent which can be compared with that of morphine. It is sometimes astonishing to what degree this remedy can be carried and not transcend the point of tolerance.

The only rule which can be given with regard to its administration, is to completely control all pain and nervous irritation, and the amount which will be required to do this must be learned by experience. We usually commence by giving such quantities as are represented by 5 or 10 drop doses of Magendie's solution, once an hour or two hours, and continue, it may be, to a point just short of producing narcotism.

Where the case is not complicated with the peritoneal lesion, but perhaps is associated with phlebitis, sometimes no opium at all will be required, and, if administered, greater care must be exercised, for the patient is in greater danger of becoming narcotized; but when the peritoneal lesion is present the toleration is sometimes enormous. It is not the quantity given, but the effect produced, that is to govern its use; but when the respirations have been brought down to 12 per minute, it should not, as a rule, be continued in the same doses which have been administered to produce that effect. It is in these cases, where there is apparently no peritoneal lesion, but the secondary lesion is chiefly phlebitis or metro-phlebitis, that we find the quinine so valuable. My habit is to give from ten to fifteen grains at a dose, night and morning.

Another point in the treatment is, that it should be adapted to the special form of the epidemic which is exhibited, and to meet the indications of each special case. Each epidemic having its own special type and nature, it is important not to fall into the rut of any special method of treatment, and it is in recognizing the leading features of the epidemic, and the leading features of every case in the epidemic, that constitutes the skill of every man in the management of this disease.

The first special indication in its management is to eliminate as much as possible the poison from the system; but I have found by experience, and I am becoming more convinced of the fact, that we are able to accomplish but very little in the way of elimination. It is not like a special poison taken into the stomach, which can be vomited, and all the results we have to deal with is what has been produced by the poison absorbed before the mass was removed.

In such diseases, however, as typhus fever, scarlet fever, and those belonging to that class, the doctrine of elimination, theoretically, is very well indeed, but, practically, I do not believe it to be of much value.

In all these cases it is well, however, to see that the kidneys perform their function well—see that there is no accumulation in the primæ viæ, acting as an irritant. But aside from this, any treatment which depresses the system should be carefully prohibited.

I believe that the great point in the treatment of this affection is to sustain the vital powers, counteract the special local effects, and bridge the patient over, while the effects of the poison are being produced.

Another indication is to control the vascular and nervous system.

With a pulse ranging from 100 to 160 perhaps, it can be readily seen that the vital power is rapidly being worn out. At the same time, if there is a tendency to the local lesions from the transmission of this poison, it can be seen that the effect is produced very much more rapidly; hence we regard it as an essential indication to control vascular excitement.

For this purpose we have an agent which I regard as superior to all others, and that is the veratrum viride. It is the agent which I have employed for many years.

It will reduce the pulse when the excitement is due to an inflammatory process with an almost absolute certainty.

As regards its safety, I find a vast number of physicians who hesitate to administer it, regarding it as unsafe on account of the occasional explosions which occur, in the form of nausea and vomiting. Now it will do this sometimes if given in too large doses, and the patient will present the appearance as if in a state of collapse, which to persons unacquainted with the effects of this article appears to be extremely alarming. The surface may be cold, countenance pallid, pulse become very slow and feeble,—and this condition I have frequently seen, but have come to learn that these phenomena are not dangerous. This condition is purely temporary and the patient passes out of it in a comparatively short time, even if not given anything; but if diffusible stimulants are administerd and mustard plasters applied, they *very soon* come out of this apparent condition of collapse. In idiopathic peritonitis this condition is a benefit, for afterwards the pulse can be held with the greatest ease.

In this disease we commence by giving five drops once an hour or two, and increasing to eight or ten until we bring the pulse from 120 or 130 to 80,

if possible. In a very large majority of cases it can be brought down to this point, but in some we cannot get it below 100. Where there is great nervousness present, perhaps it cannot be done, for the influence of the nervousness has a powerful effect, as is well known to all medical men. The condition of the nervous system in the unmarried woman particularly, who may be suffering from this disease, is sometimes an important complication.

Pelvic cellulitis is the most common form of local lesion, when the poison is not sufficient to produce puerperal fever.

This patient who is before you now is aged 17½ years, and was admitted to the hospital in December. Everything in connection with her confinement was normal, and she did very well for three days, when she began to complain of pain in the abdomen, which located itself more particularly upon the right side.

This was considered as evidence that there was a tendency to an abnormal action in the abdominal cavity.

The processes of involution were interrupted or retarded by the inflammatory action which was taking place in the ligamentous region, in the cellular tissue surrounding the uterus, as evidenced by the pain, tumefaction, and tenderness upon pressure, determined by a physical examination. The tendency in these cases is either to terminate by resolution or suppuration, and if the latter takes place we have the various forms of pelvic abscess occurring. Sometimes the suppuration is the cause of the peritonitis. This patient has been treated by the use of suppositories of opium, the administration of ten grains of quinine twice a day, and the application of the tincture of iodine over the tumor, and at the present time she is doing very well.

It has also come to be a rule with many of us to avoid all operations upon the pelvic organs of the female when puerperal fever is prevailing, because of the great tendency under these circumstances to result in cellulitis and affections of like character.

In certain forms of this disease and at certain seasons of the year, there is a tendency, almost impossible to overcome, to the formation of pus.

There are also other points to which I wish to call your attention, in relation to puerperal fever.

One of the tendencies of this disease is to eliminate the poison by the formation of other diseases.

In accordance with this tendency we sometimes have a suppurative arthritis, or mammary abscess, it may be, instead of a metritis. In such cases, the inflammation of the mammary gland is the result of an effort upon the part of the system to get rid of the poison: it is nature's problem for the cure of the disease. Here also it is to be noticed, that the mammary abscess is something entirely different and distinct from the ordinary inflammatory abscess.

When these events occur, I always feel that the safety of my patient is very much increased, and that she will probably get well, where the tendency is to the formation of external suppuration, whether it be in the breasts or joints or pelvic cavity. The tendency to get well is decidedly increased, and the prognosis is more favorable. Where, however, the disposition tends to the formation of pus in the internal cavities, especially serous cavities, the prognosis is very unfavorable, because the suppuration when found cannot be removed without producing shock.

The other point upon which I wish to speak is in relation to the use of quinine as a remedy to control the tendency to suppuration.

For more than fifteen years I have insisted upon this point, and have been able in repeated instances to point out the influence which quinine has in controlling the tendency to the formation of pus. Now in all those cases in which there is manifested a tendency to suppuration, I place my patients upon quinine and rapidly carry it up to the point of tolerance, this point being indicated by a tendency to hyperæmia of the brain, manifested by ringing in the ears, confused noises in the head, etc.

Experiments have demonstrated that it is an agent of great value in preventing the development of pyæmia and septicæmia. In the *use* of this article I find that the most frequent defect is the altogether too small doses. It is of no use to give it in three-grain doses, but it must be administered in such quantities as will produce its positive constitutional effect, and carry it to the point of tolerance soon.

I am accustomed to use it in from 10 to 15 grain doses morning and evening, 10 in the morning and 15 in the evening, or even 15 in the morning and a scruple at night.

The point of tolerance in these cases is exceedingly variable. In some cases 25 or 30 grains will be given each day for several days without producing any of the cerebral symptoms of cinchonism. The doses of quinine may be doubled, and perhaps tripled, without disagreeable symptoms, by combining it with the bromide of potassium.

It is now also well established that quinine has the power of reducing the animal temperature of the body, and in some instances the effect realized has been a reduction of temperature of 2 within one hour, if given in the manner referred to.

We therefore may obtain from quinine its full effect in supporting nerve-power, in arresting the formation of pus, and also obviating the presence of pyæmia and septicæmia. I teach this doctrine, because it is the result of my own experience and observation, and have taught it for many years.

There are two points in relation to its administration of which I wish to speak. First, it is objected to, administered in such doses as I have mentioned, because it may produce paralysis of the motor power of the heart. This tendency, however, may be counteracted by the use of stimulants, and fully avoided by giving half-ounce doses of whiskey once in 3 or 4 hours.

Again, if it is manifest that there is striking tendency to pyæmia and septicæmia, and the patient complains, from the administration of moderate doses, of ringing in the ears, confusion of ideas, etc., thus preventing its administration in proper doses to prevent this tendency, the early reaching of this point of tolerance can be counteracted by the combination of bromide of potassium in 15 or 20 grain doses with each dose of quinine. In this way, as I have before mentioned, the doses of quinine may be doubled at least, if not tripled, without serious inconvenience.

The essential agents therefore which we employ in the treatment of this disease are morphine, quinine, stimulants, veratrum viride, bromide of potassium, together with such antiseptic means as tend to prevent the formation of disintegrating clots in the cavity of the uterus, and the absorption of the septic material. In all cases vaginal injections should be used, twice a day, of carbolic acid water, 40 or 60 grains to the pint, for the purpose of washing away all clots and débris of lochial discharge, which, if left to undergo decomposition, might furnish septic material liable to be absorbed in the open uterine sinuses.

There is a tendency this season to the formation of an exceedingly offensive lochial discharge, consequently a great tendency to septicæmia, which requires extraordinary care in fulfilling this indication.

This, gentlemen, embraces what I have to say to you upon the subject of puerperal fever, and we will next turn our attention to a subject which may be of a kindred nature, viz., mammary abscess. This we will study more completely at our next lecture.

Original Communications.

AN EXAMINATION OF THE MEDICAL EVIDENCE IN THE TRIAL OF MRS. E. G. WHARTON,

ON THE CHARGE OF ATTEMPTING TO POISON EUGENE VAN NESS, ESQ.

By S. C. CHEW, M.D.,

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

THE science of medical jurisprudence rests to a great extent upon authoritative decisions which have been made upon special cases. Its questions, however, belong to the domain of physical science, which does not regard authority merely as such, but looks only to carefully ascertained facts; and it is therefore of the highest importance for a really valuable application of medical jurisprudence to the administration of the law, that its recorded cases should be the result of faithful study and accurate report.

It is evident, also, that such a misrepresentation of the facts of a case as may cause false conclusions to be drawn is, if wilful, a crime against society of the gravest character, since it tampers with the sources whence the administrators of the law derive their knowledge, and thus corrupts the very fountain-heads of justice.

I purpose to narrate in this paper the prominent facts of a very important case in legal medicine which has occurred in my own practice, partly to put upon record a truthful report of the same, and partly to correct any erroneous impressions in regard to it that may have been gotten from other sources.

The annals of toxicology furnish few cases of greater intrinsic importance, or that have more generally attracted the notice of the profession, than the two trials of Mrs. E. G. Wharton, at Annapolis, Md., the one in December, 1871, on the charge of poisoning General W. S. Ketchum, and the other in January, 1873, on the charge of attempting to poison Mr. Eugene Van Ness. The present article will consist chiefly of an examination of the second of these trials. From the social positions of the parties alleged in the State's indictment to have been poisoned, and also of the accused, great interest was excited in the community in which the events occurred; and this became more wide-spread from the fact that witnesses and experts were summoned to give testimony from various and remote parts of the country.

For the same reasons the trials were reported with much minuteness of detail by many journals, and were more or less commented upon by others both here and in Europe.

Under these circumstances it is not at all surprising that strenuous efforts should have been made by the counsel for the defence to break the force of the State's allegation of poison having been administered, as affirmed by its medical and chemical witnesses. Various means were resorted to with this view, natural enough perhaps as the devices of lawyers, but when suggested or countenanced by physicians, such as to cause fully as much indignation as surprise on the part of all fair-minded members of the medical profession.

Thus, when in the former trial several members of the Faculty of the University of Maryland had expressed an opinion under oath that the death of Gen. Ketchum was due to poison, it was perhaps not very strange that the prisoner's counsel should endeavor to lessen the weight of such damaging testimony by suggesting the existence of a bias in the minds of these witnesses in favor of their colleague, who conducted the chemical examination of Gen. Ketchum's remains. Such an intimation was easily thrown out; it might possibly have effect upon some ignorant and impressible juror, and, therefore, however grossly unjust and palpably untrue, the opportunity it offered of effecting a desired end was too good to let pass. Such slight considerations as injustice and untruth could not be allowed to stand in the way of a specious argument; so that with the understanding of the duties of advocacy, which, it is to be feared, prevails too widely, the use of such an argument before a jury ought not perhaps to cause much surprise.

Very different, however, must be the estimate put upon the conduct of members of the medical profession, who could deliberately publish such aspersions upon professional witnesses as are contained in two articles, the one by Dr. J. J. Reese, in the *American Journal of the Medical Sciences* for April, 1872, and the other by Dr. H. C. Wood, Jr., in the New York MEDICAL RECORD for April 15, 1873.

I have elsewhere commented upon Dr. Reese's review of the Wharton-Ketchum trial, and have shown his unfairness as a critic in suppressing portions of testimony, and also the errors of logic with which he was chargeable in his effort to make the facts of the case square with the ill-founded theory that has been advanced by another, and adopted to a certain extent by himself.* In this paper, Dr. Reese arraigned the medical witnesses from whose views he professed to dissent, on the charge of "glaring departure from propriety," and also of prejudice in the formation and expression of their opinions. Going beyond the range of matters pertaining to his own profession, he censured the Attorney-General of Maryland for the mode in which the case was conducted for the State, and even undertook to rebuke the Judges upon the bench for certain of their rulings in court.

Let it be remembered that Dr. Reese's article was published in the interval between the first and second trials, and that it was shown in evidence taken in the second trial that it had been widely circulated in pamphlet form in the county in which that trial was to be held. Some may find in this circumstance an explanation both of the character of the article and also of its opportune appearance.

At the second trial of Mrs. Wharton, on the charge of attempting to poison Mr. Van Ness, Dr. Reese again appeared as a medical and chemical expert, accompanied this time by his colleague, Dr. H. C. Wood, Jr. As I have sufficiently examined Dr. Reese's testimony and his comments upon the first trial, I shall consider here Dr. Wood's connection with the second trial, and the notices of it which have emanated from his pen since its conclusion. That trial resulted, as is well known, in a divided jury, eight voting for conviction and four for acquittal. It is to be observed that, as Dr. Reese's pamphlet had appeared previously to the second trial, so Dr. Wood's first publication upon the subject came out in the pages of a non-professional

* See *Richmond and Louisville Medical Journal*, July, 1872.

journal, at a time when it was generally believed that a new trial would take place.

With the view, perhaps, of giving more force to their attack upon the Faculty of the University of Maryland, these witnesses in their examination in chief announced themselves as Professors in the University of Pennsylvania. The name of that school may have added weight to their testimony in the estimation of some persons; but in the cross-examination the fact was elicited that they occupied the position of auxiliary professors only. With the records that they have made for themselves in their testimony upon the stand, and in their subsequent comments upon the trials, the ancient Institution with which they are connected may well disclaim such assistants:

Non tali auxilio, nec defensoribus istis.

In the number of *Lippincott's Magazine* for April, 1873, an article appeared from the pen of Dr. Wood, entitled "Medical Expert Evidence." Its title would suggest the discussion of an abstract topic; had it been such, it would have been perfectly legitimate, and no exception could rightfully have been taken to its publication in the pages in which it appeared.

But when, under cover of this name, Dr. Wood ventilated medical questions and attacked the opinions of medical men before the general public, his course of action can be characterized only as unethical and unprofessional.

Dr. Wood should have known that no right-minded physician would stoop to follow him into the arena of controversy which he had chosen. There he might safely have remained to enjoy the cheap plaudits won from those who, while incapable of weighing medical arguments, are readily impressed by false assertions and garbled facts. Now, however, that he has ventured into the fair field of medical discussion, an opportunity is afforded for commenting upon his conduct, and for vindicating the truth.

The New York Medical Record for April 15, 1873, contains a "Review of the Medical Testimony in the Trial of Mrs. E. G. Wharton," by Dr. Wood, which, in the interest of truth, and as a matter of simple justice to my professional friends and to myself, I feel constrained to examine. If in doing so my words shall be thought by any to be harsh or unmeasured, I would call attention to the following terms in which my colleagues and myself have been assailed by Dr. Wood:—

On page 172 of the Medical Record, our evidence in the trial is spoken of as "the *most extraordinary, ignorant*, or *biassed* and *untrue* expert testimony given by the medical gentlemen *engaged in the prosecution*," etc.

Again, on the same page it is stated that the trial "had its origin, as had also the judicial proceedings, in the *blundering of Dr. Aikin and his colleagues*;" and in the same connection, "the whole faculty of the University appeared in support of their colleague Dr. Aikin, until they were *all compromised* equally with him, and their *reputations equally involved* with his."

In view of the spirit shown by such utterances, let it be judged whether justice and propriety call for smoothness of speech in reply. That which is rather needed and deserved is stern rebuke for deliberate wrong-doing.

I do not propose to burden these pages with a detailed statement of all the circumstances of the case which gave origin to the trial held in January, 1873, but shall mention its clinical features and the facts in its history which are necessary to establish its diagnosis. My object in writing this paper is to give a true account of the case from my own personal observation. I shall show in addition, 1st, that Dr. Wood's opinions are invalidated by eager partisanship; 2dly, that he has misrepresented the facts of the case; and 3dly, that he has displayed a want of professional information in regard to the subjects upon which he writes.

I would call attention at the outset to the widely different relations held to this case in a legal point of view by the various medical witnesses called by the State, on the one hand; and by Dr. Wood and his colleague, Dr. Reese, on the other.

Dr. Williams and myself, as citizens of Maryland, were compelled by process of law to be present at the trials in Annapolis as witnesses to facts which had come under our own personal observation, and were also required to give our professional opinions as medical experts. From this there was no escape; our presence and the delivery of our testimony were compulsory. That we discharged this duty entirely free from passion or prejudice is incontestably proved by the fact that previously to the trials each of us had given to the defence a written statement of what we had observed. In doing this we were under no compulsion whatever; it was purely a free-will offering, designed for no other end than to aid the counsel for the defence in the work they had undertaken.

Our course was certainly open and liberal, and neither sophistry nor malignity could impute it to an unworthy motive. So far then as it was voluntary, our action was in aid of the defence, while our testimony as witnesses for the State, as well as that of all my colleagues in the University of Maryland, was given under a constraint which no citizen can resist; for the strong arm of the law was upon us.

What, on the other hand, were Dr. Wood's relations to this case? Living in the city of Philadelphia, where no process of a Maryland court could reach him; knowing nothing of the history or merits of the case, and therefore not inspired with the desire to enter the lists in the cause of injured innocence, for he distinctly asserts that "until after the recent trial he had never read any medical or other account of the first trial;"* he bargained with the senior counsel for the defence, and received a fee to "aid," as he says, "in bringing out the facts of the case, and to give privately a professional opinion thereon." In other words, he voluntarily assumed the position of paid counsel to the counsel. These were the circumstances under which Dr. Wood came to a conclusion different from that expressed by the witnesses for the State. He deems it necessary, however, to insist that "*as far as possible* his opinion was formed without bias;" but the reason he adduces in support of this position is certainly a little curious, and will hardly be considered very cogent.

"My agreement with Mr. Thomas, the senior counsel," he says, "was that my duties should be to aid in bringing out the facts of the case, and to give privately a professional opinion thereon; for this and this only was a fee to be received. *It was to be left to Mr. Thomas whether this opinion should also be promulgated from the witness-stand, but for going on the stand no further reward was to be given or taken.* I had, therefore, no possible interest to serve in this matter, and whatever the profession may judge of my opinion, I do insist that, as far as possible, it was formed without bias."

Now it is plain from this statement that, by Dr. Wood's own showing, the compact under which he received his fee contained several specifications, one of which was, that if required by the counsel employing him, he should give his opinion from the witness-stand; yet, while admitting payment for the opinion

* Med. Record, April 15th, 1873, p. 172.

as one item, he denies receiving any remuneration for another, viz., its enunciation from the stand.

And this statement he expects to be taken as proof of freedom from bias! Truly a remarkable argument, and one which may serve to show Dr. Wood's power of lucid reasoning. To what class of persons does he address himself?

Again, he freely charges those whose opinions he impugns with partisanship and bias, forgetting that his own record in the late trial was such that he, of all the witnesses examined, should have been most careful to avoid imputations of this kind.

However conscious Dr. Wood may have been of an effort to win in a contest, it might have been supposed that prudence at least would have deterred him from the public reference to his "*side*," which called down upon him in open court a merited rebuke from the learned and dignified Chief-Justice. "It would be well," said Judge Miller, "that the witness should not speak of his side. The only parties in this case are the State of Maryland and the accused, and their interests must not be imperilled by a witness taking a side." Charity might have drawn a veil over this portion of the proceedings in which Dr. Wood appeared in so very unenviable a light, had he not flouted others with a charge which was fixed upon himself alone. After this unfortunate betrayal of his partisan position, he left the stand, the object of derision to the jury and the spectators, and of sincere pity (for the *esprit de corps* will assert itself) on the part of all the medical men present, even of those whom he was employed to attack.

And yet this is the witness who charges the Faculty of the University of Maryland with giving "biassed and untrue testimony;" with being "all compromised," and having "their reputations equally involved." Such charges betray an endeavor to accomplish by abuse what could not be effected by argument.

I mention with reluctance any statements having a personal reference to myself; but having been assured by all three of the counsel for the defence, Messrs. Steele, Thomas, and Hagner, that my testimony as a witness for the State in these trials was free from every indication of bias or passion, it will easily be believed that I regard Dr. Wood's imputations as infinitely insignificant.

From what has been stated, it is obvious that Dr. Wood's opinions must be received with great caution, from his avowed position as the maintainer of a "*side*," while his qualifications as a critic of the views of others cannot be admitted at all.

Some men, however, are partisan by nature, and are consequently unable to discern that aspect of a case which is counter to their own preconceived views; and to a certain extent those who are thus constituted are perhaps excusable for the errors into which they fall. But no faulty construction of temper or of mind can excuse such misrepresentation of facts as is to be found in the papers now under notice. In the account given by Dr. Wood of Mr. Van Ness's illness, and of the management of the case by the physicians in attendance, the misstatements are of such nature that they can only be regarded as deliberate, and made for the purpose of giving factitious support to his "*side*."

I shall not enumerate all of these misstatements; a few examples will be sufficient to show the second reason for which Dr. Wood's report of the case must be set aside as wholly unreliable.

A brief statement of the principal facts of Mr. Van Ness's sickness as they really occurred and were testified to is here necessary, in order to expose the erroneous account given of them by Dr. Wood.

On the 24th of June, 1871, about four o'clock in the afternoon, Mr. Van Ness was invited to partake of lager-beer, into which a small quantity of what was stated to be gentian bitters had been poured. This he found so excessively bitter that after taking four or five sips of it, he could drink no more. A few moments after swallowing this, his vision became obscured, and on attempting to rise he felt so weak that he grasped at the window-frame to avoid falling.* Very quickly a feeling of stiffness in the back was experienced, extending to the arms and fingers, and thence to the legs, which "straightened out in a direct line from the body." In his struggles he fell upon the floor, his jaws became rigid, and a convulsion occurred in which he felt as though there were "a crushing in of the backbone."

A second paroxysm followed, more violent than the first, and accompanied with a feeling of suffocation. Convulsions of this tetanic character, amounting to complete opisthotonos, frequently recurred, the head being thrown back and the countenance growing dusky. In the height of the paroxysms consciousness was several times lost, returning, however, when their severity abated. Dr. P. C. Williams arriving at this time, administered an emetic of sulphate of zinc, which caused free vomiting, and then gave chloroform by inhalation, which controlled the condition, and prevented the full development of the convulsions. Rigidity of the body continued, however, with extreme sensitiveness and spasmodic contractions of the limbs, especially when anything came in contact with him. At this time I saw him, and, on conference with Dr. Williams, we determined to administer hydrate of chloral, under which the tendency to convulsions gradually passed away, and sleep came on. After all convulsive manifestations had ceased, the patient was occasionally fanned, as the weather was very warm.

It is to be observed that Mr. Van Ness has never at any time before or since the events described experienced a convulsion of any kind, nor has there ever been any recurrence of the sensations he then felt.

On the following day he awoke, "feeling bright," as he said; but after eating a piece of dry toast and drinking a cup of tea, he became nauseated, and felt a sensation of burning in the stomach.

Nausea and vomiting continued nearly the whole day, and were supposed, in the absence of a better explanation, to be possibly due to the use of chloroform and chloral; though this explanation was not satisfactory, since many hours had elapsed between the last administration of these remedies and the first occurrence of the vomiting.

For these symptoms he was treated with small quantities of brandy and water, creasote and lime-water, and finally with hydrocyanic acid. Gradually they abated, and in the morning of the following day, Monday, he was again better, and by my direction took two-thirds of a cup of beef-tea, which had been brought from his sister's house, and which proved grateful and refreshing. In less than an hour afterwards he expressed a desire for more, and it was accordingly brought from the cellar, where it had been placed after the first dose was taken, in order to be warmed by the kitchen fire. Before the second dose was given, some extract of celery-seed was brought by an inmate of the house, and poured into the beef-tea. After swallowing this, nausea again came

* Within the last few days a case has been brought to my notice, of a gentleman, who, when under the influence of strychnia, which had been administered in gradually increasing doses for disease of the retina and optic nerve, experienced a sensation of confusion in the head, and in endeavoring to stand was observed to catch at the tables and chairs in the room to avoid falling.

on, and he was unwilling to take more; but about 11 P.M. it was, against his wish, given to him again, when he fell asleep, but soon awoke with great oppression in the chest, intense nausea, constant vomiting, a sharp burning pain in the throat extending to the stomach, a metallic taste in the mouth, and irritability of the bowels. Such was the condition after taking the beef-tea.

Dr. Williams, who resides in the immediate neighborhood, was summoned, and arriving about one o'clock in the morning of Tuesday, found Mr. Van Ness prostrated and pale, his surface cool and covered with a profuse perspiration, his voice almost inaudible, and his pulse scarcely, if at all, perceptible. Under the free administration of brandy, he gradually recovered from this perilous state, and later in the day was much improved, though still greatly debilitated. It must be mentioned, as a very important part of the history of the case, that on the following day, June 28th, milk-punch was prepared for the patient by his wife, and administered by her. This was well borne by the stomach; but after part of it was taken, the tumbler with the residue was placed in a refrigerator, and on being brought out was found to contain a sediment, on which account no more of it was given. This sediment proved on chemical analysis to be tartar-emetic.

The above is a sketch of the prominent features of Mr. Van Ness's case. In drawing it I have scrupulously avoided reference to any collateral circumstances except those which serve to throw light on the history and diagnosis of the case.

The medical witnesses called by the State expressed the opinion that the symptoms of the attack of the 24th of June were due to strychnia. The grounds for this opinion were: 1st, the suddenness of the attack; 2dly, the speedy occurrence of tetanic spasms of the muscles of the neck, back, limbs, and jaws; 3dly, the sensation as of a crushing blow upon the back at the occurrence of each paroxysm; 4thly, the extreme sensitiveness and irritability, which occasioned convulsive contractions upon the slightest touch or shock; 5thly, the results produced by the medical means employed; 6thly, the clearness of mind during the intervals between the convulsions; and, 7thly, as a corroborative reason, the intensely bitter taste of the very small quantity of liquid swallowed immediately before the seizure; strychnia being the most intensely bitter substance in nature.

We maintained further that the action of strychnia is so peculiar and characteristic that a conclusion as to its being the cause of symptoms observed, may be reached independently of chemical evidence.

In this opinion we were supported by numerous medical authorities, who speak of tetanus as the only condition liable to be confounded with strychnia poisoning, from which, however, it may readily be distinguished with proper care.*

The possibility of the case being due to tetanus was absolutely excluded by its history, as shown in the suddenness of the attack immediately after drinking an intensely bitter fluid, and in the entire cessation of the symptoms in a few hours. Such a history belongs neither to traumatic nor to idiopathic tetanus, while it is perfectly characteristic of non-fatal cases of strychnia poisoning. The supposition that the case was hysterical or "*hysteroidal*" in nature, as maintained by Dr. Wood, is so utterly absurd that its refutation seems almost an unwarrantable trespass upon patience.

A gentleman of calm and unexcitable temperament, who had never in his life experienced a spasmodic or nervous attack of any sort, partakes when "perfectly well in mind and body" of an excessively bitter drink, and is suddenly stricken down with tetanic convulsions of such violence as to produce perfect opisthotonos and threaten asphyxia; and this condition is pronounced by a physician who had never seen the patient, and knew nothing of his constitution, to be simply "*hysteroidal*"! It is really hard to conceive the force of folly going further. The avowal of such an opinion would seem to tax to the utmost the resources of effrontery; and the assurance shown in the diagnosis might well provoke a smile, were not the means used to give it a show of plausibility such as to cause a feeling more akin to indignation than to amusement.

Dr. Wood asserts that "none of the characteristic symptoms of strychnia poisoning were present in the case of Mr. Van Ness;" a bold statement in view of the account given in the testimony, and as I have narrated it above. In his report of the case he makes no mention of the intense sensitiveness and irritability which induced convulsions on a slight touch or shock, and which are so highly characteristic of the effects of strychnia.

Knowing, however, that they are thus characteristic, he refers to Mr. Van Ness's desire to be fanned as disproving the action of strychnia; whereas, there was not one word of evidence that the fanning was desired or practised until after the convulsive tendency had ceased.

Again, Dr. Wood avoids mentioning the striking symptoms of the respiration being much embarrassed by the contraction of the muscles of the chest, and the consequent dusky hue of the complexion. These, taken in connection with the other symptoms, are too strongly indicative of strychnia to be allowed a place in his description of the case.

The attempt to disprove the influence of strychnia by showing that the spasmodic symptoms did not occur in a regular sequence, and that certain sets of muscles were not affected in a special order or degree, is a very fallacious sort of reasoning; for, though in many cases the usual order may be observed, yet when a large dose of strychnia is taken, so rapid and general is the influence, that all the voluntary muscles may be almost simultaneously affected. This is admitted by Dr. Wood to be true in some cases of strychnia poisoning; it was true in Mr. Van Ness's case; for, though he spoke of the "stiffening sensation gradually extending" from his arms to his legs, yet he did not use the word *gradually* in the sense of *slowly*, since only a few moments elapsed from the first sensation of uneasiness to the full development of the attack.

The symptoms of Sunday and Monday, the 25th and 26th of June, were ascribed by the medical witnesses for the State to the action of an irritant poison. This opinion was based, 1st, upon the repeated occurrence of gastric or gastro-intestinal irritation after taking different articles of food and drink, some of which produced a sedation of burning in the stomach;

* See Gross's Surgery; Da Costa on Diagnosis; Hammond on Diseases of the Nervous System. The opinion expressed above was controverted by Dr. J. J. Reese, who stated in his testimony that "there is not a single poison that can be exclusively determined by the symptoms; if you could not distinguish by the symptoms, there would be only one other means of distinguishing; that would be a chemical analysis of the food." It is somewhat noteworthy that in a report of a case of strychnia poisoning published by Dr. Reese in the *Amer. Journal of the Med. Sciences* for Oct., 1861, a precisely opposite opinion is expressed. He states that he conducted the chemical examination with scrupulous care and "entirely failed to detect any evidence of the presence of strychnia;" yet "all the moral circumstances connected with the case (as elicited in the subsequent trial) as well as the *symptoms attending the woman's death*, clearly pointed to poisoning by strychnia."

and 2dly, upon the profound sedation which occurred after the swallowing of the beef-tea in the evening of the 26th of June.

I expressed the opinion in regard to these symptoms that they were "due to some irritant poison taken with the food, but apart from a chemical analysis I would not say what the specific substance was."

With the light thrown upon them by chemistry, I stated without hesitation that I believed them to be due to tartar-emetic. I shall refer to this analysis hereafter, and show how absolutely certain its results were.

Dr. Wood, from his vantage-posts in Philadelphia and at the trial-table for forming an accurate diagnosis, attributed the condition to "overcrowding the stomach with beef-tea;" and in order to get rid of a circumstance so prejudicial to his view of the case as the "sharp burning pain in the throat extending to the stomach," of which Mr. Van Ness complained to Dr. Williams, he adopts the easy course of omitting this part of the description.

According to Dr. Wood's account, Mr. Van Ness felt, after the second dose of beef-tea, a "sensation resembling heartburn," whereas these words were really used not to describe the effect of the beef-tea, but that experienced in the early morning after taking a cup of tea for breakfast.

In still another case has Dr. Wood misrepresented the testimony that he criticises, in order to make occasion for censuring the State's witnesses. On page 170 of the MEDICAL RECORD he affirms that Dr. Williams and Dr. Chew "stated that they recognized the case as poisoning at the time of its occurrence." No such statement was anywhere made, or is to be found in the testimony. Dr. Williams and myself were both struck with the resemblance between Mr. Van Ness's symptoms and those of strychnia poisoning; but in the urgent necessity of giving relief we did not immediately form the definite opinion that the condition was certainly due to strychnia. The circumstances in which we encountered the case were such as to render it almost inconceivable that poison had been given; and so far from being reprehensible, it is creditable to a physician's humanity that he does not too suddenly arrive at the conclusion to which we were ultimately forced. In such circumstances opinions do not immediately crystallize into definite shape.

Let it be remembered, however, as a very important fact, that the treatment adopted at this stage of the case, viz., the administration, first of an emetic and afterwards of chloroform and chloral, was precisely what we would have used had we known with the most perfect certainty that strychnia had been taken. It was precisely the treatment which in a number of reported cases of undoubted strychnia poisoning has been the means of saving life.

In another place Dr. Wood asserts that "Dr. Chew went so far as to testify that the proper treatment of tartar-emetic poisoning was the free exhibition of prussic acid."

I regret to be compelled to say of this statement that it is deliberately untrue, and is a manifest perversion of my words, made with the intent of invalidating my opinion and placing me in a false position. In answer to a question, I had stated that prussic acid might be serviceable in allaying the irritation of the stomach caused by tartar-emetic, an opinion which can be supported by the highest authority. But this assertion is utterly different from that which Dr. Wood attributes to me.

I shall refer to this matter again in connection with the evidences of Dr. Wood's imperfect information upon professional subjects.

Again, on page 170 of the MEDICAL RECORD, the following passage occurs: "The reasons these gentlemen (Drs. Williams and Chew) gave for their opinion did not possess much clearness of detail, and have passed, to a great extent, from my memory." It is scarcely necessary to comment on the utter worthlessness of a criticism, the data for which the critic has forgotten at the very time of writing it; but I must call attention to a more serious fault shown in this passage than a defective memory. He goes on to say: "Dr. Chew, however, gave as one of the mainstays of his opinion, "*the loss of consciousness during the convulsions.*" Here again the perversion of my words is "gross as a mountain, open, palpable."

What I had in truth said was, that among other indications of strychnia poisoning the clearness of the patient's mind was noticeable, *consciousness being lost only during the convulsions.* A more egregious misrepresentation could not have been devised. With such manipulation of testimony, and such separation of words from their context, any sentiment, however absurd, may be put in the mouth of a witness.

The foregoing illustrations must be abundantly sufficient to prove the assertion that Dr. Wood's account of the case is utterly unreliable.

It remains to show that it is invalidated still further by his want of acquaintance with the subjects upon which he writes; and it is to be observed that this ignorance is displayed in matters about which, as a professed toxicologist, he might have been expected to be informed.

Dr. Wood is evidently wholly unaware of the application of prussic acid for the relief of gastric irritation caused by tartar-emetic. He has apparently never read the well-known articles upon pneumonia by Dr. C. J. B. Williams in the Library of Practical Medicine, and in the Cyclopædia of Practical Medicine; or perhaps his confessedly unretentive memory has forgotten them.

In the former article the following passage occurs:—

"The first dose of tartarized antimony commonly causes vomiting; if this should not cease, two or three drops of the diluted hydrocyanic acid will generally stop it."* And in the Cyclopædia of Practical Medicine the same author thus writes: "Where the vomiting from tartarized antimony becomes obstinate and urgent, we can confidently recommend the addition of a drop or two of hydrocyanic acid to each dose of the medicine."†

It would be well for Dr. Wood to ponder these passages.

Let it be observed that it was simply as against gastric irritation that the prussic acid was given to Mr. Van Ness, and as thus employed it was very beneficial.

On the following day, when great sedation occurred, its use was not thought of.

Dr. Wood's reading is very limited, it would seem, even in the literature of the subject which he professes to make a specialty. "Every medical man knows, or ought to know," he says, "that there is a universally recognized antidote to tartar-emetic." His reference is no doubt to tannic acid, and he seems wholly unaware that the claims of this agent to be an effective antidote to tartar-emetic have been much controverted; as, for instance, by that distinguished teacher Prof. Stillé, who, in his work upon Therapeutics, thus writes: "In poisoning by tartar-emetic it is recommended to give infusions of vegetable astringents, such as cinchona, galls, green tea, etc. But the best authorities deny the efficacy of these astringent substances."†

* Lib. Pract. Med., vol. iii., p. 233. † Cyclop. Pract. Med., vol. iii., p. 628.

† Stillé's Therapeutics and Materia Medica, 2d edit., vol. ii., p. 386.

Inasmuch, however, as Dr. Wood refused to recognize the authority of Prof. George B. Wood in questions of toxicology, when it was quoted on the stand against his opinions, he may equally disregard that of the present incumbent of the Chair of Theory and Practice of Medicine in the University of Pennsylvania. Possibly these eminent medical men may share, in his estimation, the common fate of prophets in their own country.

I would refer him, therefore, to the following passage from Pereira, a most weighty authority on any subject connected with the chemistry of drugs: "Nutgalls are recommended as an antidote in cases of poisoning by emetic tartar, *but I very much doubt their efficacy.*" *

The prominent clinical facts of this noted case have now been sufficiently set forth; as also the opinions pronounced upon those facts by the State's medical witnesses, and the grounds for those opinions.

It remains to say a few words in regard to the chemical analysis which resulted in the discovery of tartar-emetic in the tumbler of milk-punch prepared for Mr. Van Ness. This analysis must stand or fall with that which was made of the remains of Gen. Ketchum, the results of which were brought forward in the former trial.

The substances to be analyzed were put into Prof. Aikin's hands at the same time; the methods pursued in the two examinations were substantially the same, and the results identical. Not one word was said to suggest a suspicion of the presence of tartar-emetic; and so, guided by a brief sketch of the case, Prof. Aikin was led to search for strychnia and arsenious acid. These he did not find, but in his search he detected antimony in both the materials submitted to him.

His conclusions were ratified and confirmed by Prof. Mallet, of the University of Virginia; by Dr. Craig, the chemist in charge of the laboratory of the Surgeon-General's office in Washington, and by Prof. Tonry, of the Maryland Institute in this city.

The chemical experts for the defence professed to dissent from Prof. Aikin's conclusions on two grounds; 1st, because the same results as to color reaction could be gotten, as they alleged, from material known not to contain antimony; and 2dly, because antimony in the metallic form was not produced.

As to the former objection, I have elsewhere shown its utter fallacy, and shall not again discuss the question here.† Suffice it to say, that while professing to follow the same processes as those used by Prof. Aikin, these chemists deliberately omitted to apply what he regarded as a crucial test.‡

As to the second objection, let the following letter be its sufficient and final answer:—

MARYLAND INSTITUTE, CHEMICAL DEPARTMENT,
BALTIMORE, *June* 24, 1873.

PROF. S. C. CHEW:

DEAR SIR,—I still retain in my possession the metallic antimony which I obtained from the viscera of General Ketchum, and which I carried to Annapolis in January, 1872, and held ready for exhibition to the jury and chemical experts for the defence in the first trial of Mrs. E. G. Wharton. This antimony I am ready to submit to an examination to be made in my presence by any chemist of known integrity and standing in his profession. I have also specimens of crystals of tartar-emetic gotten from the same material as that from which I obtained the metallic antimony, and hold them ready for a similar examination. I would add that during the trial I offered to one of the counsel for the defence, to be examined by their chemical experts, a portion of the viscera, which I had retained, but my offer was not accepted.

Very truly yours,

WM. P. TONRY,

Prof. Anal. and Applt. Chemistry, Md. Institute.

I have myself examined with the microscope the specimens of tartar-emetic obtained by Prof. Tonry, and have found them to correspond with the rhombic crystals of the salt, delineated in Prof. Wormley's work on the Micro-Chemistry of Poisons. Prof. Tonry's analysis was not finished within the time allowed by the court, and therefore its complete results were, from a technicality, not admitted as evidence. They were, however, brought into court, and offered for exhibition, though in the absence of the jury; hence they belong to the scientific record of the case. It is, of course, evident that they supplement, and at the same time fully corroborate, Prof. Aikin's analysis.

In concluding this portion of the subject, I assert that no proposition in chemistry is more conclusively demonstrated than that the viscera of Gen. Ketchum contained antimony. It challenges the detection of a flaw, and to deny it, in the face of the proof by which it is substantiated, is to court the reputation of being either hopelessly ignorant or shamelessly dishonest.

I repeat that the milk-punch prepared for Mr. Van Ness was subjected to the same analysis as the viscera above mentioned, yielded the same results, and was thus perfectly proved to contain antimony.

Dr. Wood quotes in both of his papers, apparently with great satisfaction, an extract from the new edition of Dr. Taylor's work upon Medical Jurisprudence, which requires a brief notice. The case of Gen. Ketchum is mentioned in this extract, and the extraordinary statement is made in it, that "but for the alleged discovery after death of tartar-emetic, no suspicion of poison would probably have arisen."

Now it is certain that Dr. Taylor has received a report of the first trial of Mrs. Wharton. In that report it is made perfectly clear that, so far from the discovery of tartar-emetic having given rise to the suspicion of poison, it was the suspicion founded upon the symptoms and history of the case that led to the chemical examination. The medical opinion was not the consequence, but the *cause* of the chemical analysis.

This dilemma is therefore presented; either Dr. Taylor had not read the report of the trial in his hands, when he wrote the sentence quoted above, or he had read it. If he had not read it, he expressed an opinion, involving the professional reputation of medical men, upon a subject about which he had not used the means at his command to inform himself.

If, on the other hand, he had read it, then his opinion is in direct contravention of a fact within his own knowledge; for it is distinctly stated in the report of the trial, that the suspicion of poison *antedated the chemical analysis*, and therefore could not have taken its origin from it.

If, as a third supposition, Dr. Taylor, having read the trial, has forgotten or overlooked the fact referred to, then he owes it to justice, and to the physicians

* Mat. Med., vol. ii., p. 525. The same passage occurs in an abridged edition of Pereira, edited by Dr. H. C. Wood himself, page 410.

† *Richmond and Louisville Medical Journal*, July, 1872.

‡ Dr. Reese, when on the witness-stand, said in response to a question from the Court, "I remember that Dr. Aikin and Prof. Mallet testified that the solution should be kept acid; I do not remember whether I kept mine acidulated."

Court.—"Was the solution you treated with sulphide of ammonium an acid or alkaline solution?"

Witness.—"I don't know." That is, while professing to follow Prof. Aikin, he could not say whether in the crucial test of the experiment he had followed him or not!

whom by implication he has censured, to acknowledge his error. Apart, moreover, from considerations of justice, the credit of Dr. Taylor's work is concerned; for if so signal a mistake has been made in the report of one case, what value can be attached to that of any other in the book?

The eminent authority of Dr. Taylor is fully conceded, but it seems clear that upon this subject his opinion has been formed hastily, and upon one-sided evidence, and gives no valid support whatever to Dr. Wood's statements.*

In his article in *Lippincott's Magazine*, Dr. Wood speaks of certain evils in the prevalent system of medical expert evidence in this country. That evils exist is undoubtedly true; and no more forcible illustration of them could be found than is presented by the trial under consideration. The true explanation of them, which Dr. Wood is perhaps scarcely prepared to admit, is set forth in the following very pointed terms in a new edition of Wharton and Stillé's Medical Jurisprudence.

It is commended to his very careful consideration when he is next asked to assume the part of volunteer medical expert, paid to sustain a "*side*."

"The radical defect," says this book, "of our present Anglo-American practice, in this respect, is the volunteer position of experts, which makes them, to a large measure, the mouthpieces of a party who often only selects them because their preascertained views suit his purposes; or who only presents them with such materials as subserve his interests. In what way this defect can be removed is one of the most important questions to which social science can now be addressed."

I have now completed my task, and have discharged what I believed to be a duty binding upon me by reason of the opportunities I have had for knowing the whole history of this remarkable case. I have examined it solely from a medical point of view, and have not discussed the issues of guilt or innocence, which can have no place in medical questions. So far as these are concerned, the position of the medical witnesses for the State would be wholly unaffected, whether the patient's condition were due to accident or design.

I have felt that it would be wrong, with my knowledge of the case, to allow a misrepresentation of the facts to go upon record as an undisputed narrative, and to suffer erroneous medical opinions upon these facts to remain unexposed.

If my words have seemed unduly harsh, I regret the necessity of speaking plainly; and I would plead in their defence the dictum of one who is equally an authority in logic and in morals:

"Sharpness of speech," says Dr. Isaac Barrow, "may sometimes be used in defence of truth, and impugning errors of bad consequence; especially when it concerneth the interest of truth that the reputation and authority of its adversaries should somewhat be abased."

BALTIMORE, *June* 25th, 1873.

KEMPSTER.—Dr. Walter Kempster, second assistant physician for six years of the N. Y. State Lunatic Asylum, at Utica, has been elected Superintendent of the Northern Wisconsin Hospital for the Insane, located at Oshkosh, Wis.

* How Dr. Taylor may have received a one-sided account of the testimony in the trial is perhaps explained by the fact that the new edition of his work on Medical Jurisprudence is edited in America by Dr. J. J. Reese.

Progress of Medical Science.

ATROPIZED CASTOR-OIL AS AN APPLICATION IN SOME CORNEAL AFFECTIONS.—Dr. D. C. L. Owen writes to the *Br. Med. Jour.* of May 10, that in the treatment of irritable ulcer of the cornea, and of abrasion of the epithelium, it is generally advisable to use some application of a viscid nature which may fill up the inequality of surface and reduce the irritation caused by the movements of the eyelid to a minimum. For this purpose no remedy is so fit as castor-oil; and if to the oil be added sulphate of atropia, in the proportion of from one to four grains to the ounce, the effects of the latter may be obtained. Castor-oil is to be preferred to glycerine and gelatine, since it is not, like the former, painful when applied to the eye, nor like both, easily washed away by the tears.

A NEW SUBSTITUTE FOR QUININE.—*The British Med. Jour.* says that among the specimens of drugs exhibited in the Vienna Exposition is the *Echisess echolaris*, a plant of the natural order of *Apocynæ*. It is especially abundant at Luzon, in the province of Batangar, in the Philippine Islands; and its bark has long been used by the natives under the name of *dita*, as a remedy in all kinds of fever. Herr Gruppe, an apothecary in Manila, has found in it an uncrystallizable, very hygroscopic, bitter substance, to which he has given the name of *ditaür*. The principal Spanish physician in Manila, Dr. Miguel Zina, has given it to numerous hospital patients under his care, and has found that ditaür is not only a perfect substitute for quinine, but that its use is not followed by the disagreeable results which often attend the use of quinine. It is given in the same doses and in the same way as quinine. Its activity as a tonic was well marked in several cases. Ditaür is prepared from the bark in the same way as quinine from cinchona. 100 *grammes* of the bark giving 2 *grammes* of ditaür, 0.85 *gramme* of sulphate of lime, and 10 *grammes* of a perfectly inert extractive matter. A single tree yields a large quantity of bark without injuring its growth. Its price in Europe is estimated at about 160 *francs* per kilog.

OLEATE OF MERCURY IN SYPHILIS.—Mr. Berkley Hill says he has employed the oleate of mercury in a large number of cases with the following results: In the first place, if continuously applied, it quickly produces the usual effects of mercury on the system, and if used in sufficient quantity causes salivation. Secondly, it is apt, in delicate, fair-skinned persons, to excite violent smarting pain, which, though rarely lasting more than half an hour, if so much, is enough to disgust them with the remedy. The irritation may soon cause erythema and slight vesication, these being the most serious local effects noticed by Mr. Hill. To avoid these undesirable occurrences Mr. Marshall, who first suggested the remedy, has devised three preparations of different strengths, containing twenty, ten, and five *per cent.* of peroxide of mercury respectively: to the weakest dilution ten per cent. of morphia is added. With one or the other of these preparations the application of this form of mercury can be continued on even very sensitive skins. When used for inunction, about a scruple or half a drachm of the twenty per cent. jelly should be rubbed gently into the flank till it is absorbed by the skin, which occurs in about eight or ten minutes, leaving the skin almost dry and not greasy. This may be repeated once or twice in twenty-four hours, of course changing the site of the inunction

each time. The anointed part may be washed next day without fear. This quantity usually causes swelling and slight soreness of the gums in a week, if anointed once a day, or in four days, if employed twice daily. He has found the ten per cent. preparation most useful as an adjuvant to the ordinary treatment by iodide of potassium internally or for persons whose stomachs do not bear mercury.

The great advantage of the oleate over other forms of mercury, when externally applied, lies in the rapidity of its absorption. When the twenty per cent. form is smeared as a cosmetic over syphilitic papules or stains it is remarkable how rapidly the papules sink down and grow pale.

Again, it is of great service in fissures of the fingers about the nails or palms, the weaker preparations being employed at night and the hands covered with wash-leather gloves. Gloves should also be worn out of doors, the cracks being closed with court-plaster and collodion.

As a paraciticide the oleate has proved exceedingly valuable. In the hands of Mr. Hill success has not followed the use of the oleate in non-syphilitic affections, diseases of the joints, or inflammatory affections.

The formula for the preparation of this substance is given as follows:

For the 20 *per cent.* solution, stir ten drachms of oleic acid in a mortar, while two drachms of precipitated peroxide of mercury are gradually sprinkled into it, and triturated frequently during twenty-four hours, until the peroxide is dissolved, and a gelatinous solution formed.—*The Practitioner.*

Clinical Illustrations of the Value of Phosphorus in certain Forms of Disease of the Nervous System.—Under this heading, Dr. W. H. Broadbent, of London, relates cases of epileptiform vertigo, severe neuralgia with gastric complications, nervous break-down from overwork, and atonic dyspepsia. He thinks the failure on the part of phosphorus to answer the expectations of those who thought a few years since they had in it a powerful remedy in this class of affections, is to be explained by the difficulty of administering it without destruction, or, at any rate, impairment of its activity by oxidation. He says, that instead of giving it as formerly, dissolved in almond or olive oil, and suspended in mucilage, in which form oxidation takes place slowly, but which forms a nauseating mixture, he has administered it dissolved in oil or lard and inclosed in a gelatine capsule; the dose is about $\frac{1}{10}$ of a grain, and it may be taken two or three times a day, always after food. When dissolved in cod-liver oil phosphorus appears to undergo oxidation more rapidly than in any other medium by which it has been administered, and in the form of pill its deterioration is but little less rapid. Dr. Broadbent thinks it as absurd to substitute phosphoric acid for phosphorus as it would be to expect sulphuric acid to give us the therapeutical effects of sulphur.—*The Practitioner.*

Therapeutical Effect of Liquor Sodæ Chloratæ.—Dr. Cooper advocates the use of Labarraque's solution in relaxed states of the uterine and periuterine tissues, and thinks that it gives tone to the weakened utero-sacral ligaments, increases vaginal contractions, removes the bearing down and tendency to prolapse, diminishes congestion of the neck of the womb, thereby lessening very considerably leucorrhœal and menorrhagic discharges; and these effects are followed by the entire subsidence of sympathetic disturbances, the sacral, rectal and ovarian distress, the hypochondrial tumefaction, the gastric and precordial sinking, the sub-mammary stitch, and chest pains and headache. He recommends two or three drops of the ordinary commercial solution to be placed in half a tumblerful of water, and directs that a dessert-spoonful of this be taken occasionally. Should disagreeable symptoms be produced by the medicine,—*e. g.*, rapid emaciation and influenza-like debility, which is its most uniformly unfavorable symptoms,—it should be discontinued for some time. As an ingredient of vaginal douches in ulceration of the neck of the womb, hypochlorite of soda gives great relief.—*Dub. Jour. of Med. Sci.*, April.

Treatment of Chloroform Narcosis by Ice in the Rectum.—Dr. Baillée thinks there is no readier or more effectual mode of combating the narcosis of chloroform than that of introducing a small piece of ice into the rectum. But little force is required to pass it through the anus; it melts immediately and causes by its presence a deep reflex inspiration, which leads to respiratory movement and re-establishment of the cardiac function. The method is also recommended to be pursued in the treatment of apparent death in the newly born.—*Bul. Gén. de Thérap.*, April 15.

Neuriasis is a name given by Dr. C. B. Radcliffe to the condition of a class heretofore known as "nervous, hysterical, or hypochondriacal" people. For the most part, people of this class are easily tired, easily become faint from want of food, and are easily overcome by sleep. They are more the slaves of involuntary, irrational impulse, more wanting in composure, than is consistent with a well-balanced mind. They are more frequently women than men, and are never the robust and strong-minded of either sex. In them the feminine qualities of body and mind predominate. Certain peculiarities of body and mind are more or less constant in this condition—*e. g.*, proneness to pass large quantities of pale, limpid, neutral urine, under any emotion or excitement, or after it, with a frequently irresistible *besoin d'uriner;* proneness to abdominal flatulence, *pneumatose intestinale;* proneness to fits of laughing and crying, without sufficient reason for them; proneness to globus; proneness to overflow of saliva; proneness to constipation; together with tenderness on pressure, with more or less uneasiness or actual pain apart from pressure, in one or other part of the abdomen, or under the left nipple, or somewhere in the course of the spine; with a marked disposition to spasm; and with as marked a disposition to periodicity in one form or another. Among the latter, or mental peculiarities, undue sensitiveness; overpowering craving for sympathy; quick and perverse likes and dislikes; feebleness of will, showing itself in impulsiveness and in many other different ways; fancifulness; imitativeness; unbalanced spirits, the inclination being commonly towards despondency; and, lastly, a comparatively feeble sense of moral obligation.

Few at the present day will be prepared to contend that the womb has any special connection with hysteria, or the liver, or any other abdominal viscus with hypochondriasis; or to doubt the correctness of the view which regards both hysteria and hypochondriasis as disorders, closely allied, of the nervous system. Still it may be doubted whether, practically at least, this latter view is as clearly realized as it ought to be—whether the words hysteria and hypochondriasis do not still retain a good deal of their old meaning, and not unfrequently mislead effectually in practice. At all events, hysteria and hypochondriasis can be no fitting names for that general derangement of mind and body of which we have been speaking. Another name, he thinks, is evidently desirable, which will point away from the womb or liver, or other abdominal vis-

cus, to the nervous system; and hence his excuse for proposing the term *neuriasis*. He hopes that the time will come when it will be possible to get a step further than this, and choose a name which will include the mental as well as the nervous half of the disorder in question; for he cannot help but think that the *nervous* trouble is the effect rather than the cause of the *mental* trouble; and is even sanguine enough to hope that eventually, by the institution of a sound discipline, in which the mind is taught—chiefly through wise mothers acting upon it in the morning of life—to know and exercise its high powers of subjecting the feelings and thoughts, as well as actions, to sound reason and will, that mankind may be delivered, not only from the evils of neuriasis, but even from the still graver evils of actual insanity.—*Br. Med. Jour.*, April 5.

Section of the Orbicular Muscle and Integument at the Outer Canthus, as a Prelude to the Extraction of Cataract.—Edw. Chessire writes to the *British Med. Jour.* of April 5, that he has recently been making a section at the outer canthus through the fibres of the orbicular muscle and the integument, before operating, and has found much advantage therefrom. The advantages attending this method are: the more extensive exposure of the globe, enabling the operator to manipulate his instruments and make his section through the cornea with greater ease. The spasmodic contraction of the orbicular muscle being overcome, the surgeon is left to complete his operation at leisure; while all risk of sudden protrusion of the lens, followed, as it sometimes is, by prolapse of the iris and escape of the vitreous, is almost entirely avoided; and the contraction of the lids on the globe, which is sometimes a troublesome symptom in the after-treatment of cataract extraction, is prevented.

With division of the orbicular muscle, the wire speculum, which greatly facilitates each step of the operation, may be used without injury or annoyance to the patient. No sutures are required, as the divided surfaces readily unite, and scarcely leave a trace behind them. All that is necessary to be done is to keep the eyelids nicely in a position for a few days after the operation by means of strips of court-plaster. All bandages and other covering after extraction are, to his mind, objectionable. Where great neatness is desired the section of the muscle can be made subcutaneously.

Oxide of Zinc in the Diarrhœa of Infants and Young Children.—Dr. Brakenridge, of Edinburgh, whose experience is very extensive, and who has employed all the remedies in use for infantile diarrhœa, gives the preference to the oxide of zinc. He says 1. Diarrhœa in these cases arises from a condition of debility and great susceptibility of the nervous centres, which prevent proper secretion from the alimentary tract. 2. It is intimately associated with convulsions and convulsive affections. 3. It is accompanied by congestion of the secreting surface of the digestive passages.

To meet these conditions requires a remedy which is at once tonic, antispasmodic, and astringent. These properties he believes to be united in the oxide of zinc. It is a tonic for the nervous system, just as iron is for the blood. As an antispasmodic and astringent it has already gained a reputation founded on clinical experience. He has employed it in twelve cases, four of them girls and eight of them boys, and varying in age from four months to one and a half years. The form was usually that of the powder, but it was also given in a solution of gum-arabic, with a slight addition of glycerine. The general results observed were—1. That it moderated the diarrhœa quickly. 2. That vomiting stopped. 3. That digestion improved. 4. That intestinal hemorrhage was frequently arrested. 5. Teething was favored rather than otherwise. 6. That even where no change was made in diet, and the other conditions remained the same, the treatment progressed favorably. 7. When, however, diet and regimen were carefully regulated, success was more rapid and decided. *Med. Times and Gazette—Allg. Med. Central-Zeit.*, 47, 1873.

Intra-vaginal Auscultation in the Diagnosis of Pregnancy.—An interesting paper on this method of auscultation was recently read before the Academy of Bologna, by Dr. Verardini. He concludes as follows:—

1. Internal or intra-vaginal auscultation is of the greatest importance for detecting pregnancy during the first months. A characteristic bruit may then be heard, if the instrument be pressed against the cervix uteri.

2. This method was first announced by Meygrier in 1825, and four years later was employed by Nauke, but latterly has been brought into frequent use, in England, by Routh, who, in conjunction with the author, found that he was possessed of the means of recognizing both early pregnancy and placenta prævia.

3. If it be impossible to make a satisfactory diagnosis of placenta prævia during the early months of pregnancy, it can always be determined during the later stages, from the continuous bruit.

4. The utero-placental bruit, the indication that the fœtus is pressing against the uterus, is soft and prolonged, similar to that heard in aneurismal tumors when the stethoscope is pressed upon arteries. When once heard it can always be detected a second time.

5. It is important always to be sure that there is no pulsating tumor or artery in the neighborhood of the cervix.

6. The prolonged utero-placental bruit, which is distinctly appreciated during the first months, ceases at the commencement of the sixth or seventh month.

7. If other symptoms of pregnancy are present, and this characteristic is absent, the diagnosis will remain in doubt. It is, then, most probable that there is uterine disease; certainly, if there have been symptoms that pregnancy has at some time taken place, there must have been disease of the ovum, followed by death of the embryo or fœtus.

8. In making the examination the patient may lie upon the back or the side; but if in this position the accoucheur fails to hear any bruit, then let him place the patient in the knee-elbow position, and he will succeed without difficulty.

9. Internal auscultation is of great importance in practical and forensic medicine and in surgery. Early pregnancy can thus be diagnosticated, and many possible errors avoided.

10. The name given to the instrument employed is the vagina-uteroscope. It can be made of various shapes, and is usually of gutta-percha, to render it as light as possible.—*Gaz. Med. Ital.*, 17, 1873.—*Allg. Med. Central-Zeit.*, 47, 1873.

Thudicum's Douche.—Dr. Frederick P. Henry (*Phila. Med. Times*, May 17, 1873) mentions the case of a girl, two years old, who had introduced a large-sized shirt-button into her nose, and was quickly relieved by the aid of Thudicum's douche. The child's cries, which were comprised in one prolonged expiratory effort, seemed to have aided the operation by raising the velum and thereby preventing escape of water into the mouth, which any one who has used the instrument on his own person knows is so liable to occur.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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

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THE EVILS OF CARELESS PRESCRIBING.

From the time when there were no physicians, and when it was customary to ask the nearest neighbor what could be given to relieve the sick one, up to the present, there have always been a class more willing to take the advice of an outsider than the counsel of a physician. It is amusing to see with what respect any invalid will listen to the suggestion of a friend as to the cause of his malady, the course he shall pursue to gain health, and with what persistency he will keep up a plan of treatment founded upon such suggestion. It is vain to hope for any radical change in this respect, and so long as the ordinary domestic remedies are employed, no particular harm can come of its practice. Castor-oil, catnip-tea, peppermint cordial, epsom salts, boneset, an occasional foot-bath, and the application of a mustard-plaster, are generally used with a discretion sanctioned by the experience of our great-grandmothers, and with an ordinary understanding of the effects to be expected of each. The community, however, are enlarging their list of remedies to such an extent that it is no easy task to separate them from most of those used by the profession. The articles of the materia medica which were at no distant time the exclusive property of the educated physician, have their respective merits discussed by the laymen with an impudent assurance that is astonishing and humiliating. The consequence is, that very many apparently intelligent people do not hesitate to urge the use of potent drugs, not a few are willing to accept their assertions as authoritative and act upon them accordingly, and still a greater number prescribe them for themselves.

Every one of ordinary observation must be prepared to accept these assertions as facts. In view of such an acceptance, it is interesting to inquire into the causes of such a state of affairs. As a profession, we alone are accountable for all this dangerous knowledge of potent drugs. There are no objections to informing the people on matters connected with the preservation of health, and the means to be employed to prevent disease. This, as a profession, is our duty; but in doing our whole duty it is not only unnecessary, but unwise, to strive to educate them beyond their point of comprehension. By so doing, we tempt their presumption and stimulate their assurance.

The information has not been imparted through medical works, nor through medical pamphlets, as the technicalities of expression in such productions offer a barrier to the laymen which even an extraordinary desire for acquiring a knowledge of the strange things in medicine cannot usually overcome. The lessons are in the vast majority of instances given in the sick-room. The physician, in the desire to impress upon his patient his knowledge of his case, and his skill in its treatment, is too apt to give short clinical lectures for the benefit of the bystanders, to name the medicines used, and to explain his idea of their *modus operandi*. We see no harm in satisfying the patient as to the nature of his malady so far as it may be necessary to inspire confidence and calm unnecessary fears. This is, in fact, a plain matter of obligation; but when we go farther than this, we take upon ourselves a grave and unwarrantable responsibility. The patient is nothing but a patient, and not a medical student. If we view him as the latter, and inform him that he is taking this or that article in the materia medica, we give him the best possible excuse for using his own judgment and employing all the arguments which his ignorance or his conceit may dictate.

But we not unfrequently go still farther, especially in chronic cases—we not only inform them of the name and nature of the drug, but, to save ourselves trouble in giving minute directions, we leave it to the patient's judgment how, when, and in what doses to take it. How often is this done with the very fashionable stimulant whiskey, the valuable anti-periodic quinine, the powerful drug opium or its compounds! On a previous occasion we pointed out the results of such carelessness in the ultimate creation of hundreds of habitual tipplers and thousands of opium-eaters. What may be said of these articles may with equal force be said of others which are being used by such patients literally at their own discretion, the physician not unfrequently continuing the prescription so long as the patient is pleased with the medicine, or so long as he imagines it is doing him good.

Often in conversation with patients we have been surprised to learn that the ingredients of each prescription are named to them by their medical attendant. One will say that he has been taking quinine in such a dose; such a preparation of iron in such a dose, etc., etc. Another will say that he does not wish to take quinine, because it "gets into his system:"

another, that he will not take calomel; another, that aloes must not be prescribed, and so on *ad infinitum*. We repeat that the profession is accountable for such a state of things, and for the good of the patient and for the good of medicine it should be discontinued.

If we want to break up the practice among patients of arguing their cases, of actually prescribing for themselves, of taking whiskey, quinine, opium, chloral, etc., almost at their option, we should never tell them what medicine they are taking when really sick, and especially should we not leave the dose to their judgment. By neglect of these precautions we must force the patient to the conclusion that the science of therapeutics is nothing but the merest empiricism, and create in their minds a suspicion that the science of medicine is a myth, and its practice a farce.

Even in unimportant matters, in prescribing domestic remedies, it is best to be exact and positive as to quantity; aside from every other consideration, the moral effect is excellent. This should be especially so with mineral waters, the names and a certain knowledge of which we cannot prevent our patients from obtaining. It is frightful to contemplate how many gallons of these waters are drunk by these self-prescribers, because they imagine that they have a right to judge when they are required.

We call the attention of the profession to this subject, because we believe it to be a growing evil which, if not checked, will react upon us in many disagreeable ways.

THE HEALTH DEPARTMENT AND THE CELLAR POPULATION.

In every large city there is always a certain proportion of the population who from force of circumstances are compelled to live in hovels, cellars, and in crowded tenements. As the demand for such quarters increases, the supply is equalized by the gradual abandonment of particular localities by the more respectable inhabitants. This fact has been strikingly evident in the lower wards of New York, especially such as border the East and Hudson rivers. For years this tenement and cellar population have gone on steadily increasing, and have been one of the most serious bugbears to the enforcement of any of the ordinary sanitary regulations. Every means have been employed to counteract the pernicious influences which such habitations have upon the tenants themselves and upon surrounding localities, and although much has been accomplished in compelling landlords to make improvements, there were many habitations in which such improvements were impossible. In such cases, the obvious remedy was to make such premises vacant. The fear, however, of trampling upon what the meanest citizen claims as his individual right, has, until lately, prevented the Health Department from taking the requisite steps. We are happy to say that the Sanitary Bureau of our present Health Board have proved themselves equal to the emergencies of the hour. Too much credit cannot be given to Dr. James, the present Assistant Sanitary Inspector, for the manner in which he has conceived and matured the plans necessary to the accomplishment of such necessary measures. Under his direction, many of the inhabited cellars of the city have been carefully inspected, and such as have been proved to be unfit for human habitation have been ordered to be vacated. In a certain proportion of these cases the orders were obeyed with reluctance and remonstrance, it is true, but still without the necessity of using force. In certain other instances compliance with orders was effected only by the aid of a police force, who caused the furniture and effects to be summarily deposited upon the sidewalk.

Every sanitarian must be convinced that radical as is this measure, it is after all the only one which can result in the greatest good to all. These cellars not only directly increased the mortality of a district even in healthful times, but during epidemics they were the hotbeds for the spread of contagion and disease. Thus far the work has been well done, and we hope to see it continued.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, April 9, 1873.

DR. ERSKINE MASON in Chair.

VILLOUS CANCER OF BLADDER.

DR. HALL presented the kidneys and bladder removed from a patient who died Feb. 21, in Bellevue Hospital, a day after admission. The patient was 55 years of age, large, stout and muscular, and said that he had had trouble with his urine for six or eight months. The urine was described as thick and milky, and its passage was attended with some difficulty. About six weeks before admission the urine of a sudden stopped, and after much effort was voided with several clots of blood. From that time until his admission he could not urinate with ease, and when admitted he was in a very exhausted condition, and all efforts to rally him were useless.

Autopsy.—Brain not examined, lungs œdematous and congested. Large quantity of fat over the heart. Other organs healthy except kidneys and bladder. The latter was occupied by a large clot, the result of hæmorrhage from villous pedunculated growths upon the posterior and lateral surfaces of the mucous coat. Dr. H. thought the specimen was one of villous cancer. The third lobe of the prostate was much enlarged, the ureters were dilated and filled with milky urine. The kidneys presented well-marked evidences of fatty degeneration, and weighed two pounds and six ounces.

OVARIAN TUMOR.

DR. MARY C. PUTNAM presented a large polycystic ovarian tumor. The patient from whose body it was removed stated that she first noticed an enlargement of her abdomen last July, but, from the appearance of things at the time of her first examination in November, it is probable that the tumor began to grow before that time. At this examination she measured sixty inches

in circumference. There was then no difficulty in diagnosticating an ovarian tumor, with which diagnosis Dr. Weir (who subsequently saw the patient) concurred. The patient was then in pretty good health, suffering no inconveniences except such as were attendant upon dyspnœa from pressure. As an indication of an unhealthy condition of the lower extremities caused by pressure upon the iliac veins, it may be mentioned, that a year before she had had her foot crushed, and as a result one or two toes had been amputated, and the wound had not yet healed. The heart was carefully auscultated, but there was no murmur, nor anything abnormal detected. Dr. Weir thought that the patient might be operated upon, as did also Prof. Thomas; but as the circumstances were such as to preclude the possibility of her remaining in hospital (N. Y. Infirmary for Women and Children), she was simply tapped. She was tapped with Dieulafoy's Aspirator and three gallons of a coffee-colored fluid were drawn off. Although there was no perceptible diminution in the size of the abdomen, the dyspnœa and other effects of pressure were much relieved. From that time Dr. P. never saw the patient alive. She did not present herself again to the Infirmary until three weeks before her death, when it was found that her abdomen had increased very much in size, her dyspnœa was more urgent, and her œdema more considerable. She was then tapped again, and about the same quantity of fluid as at the first operation was drawn off. Three days after she was tapped again, when, after a gallon having been evacuated, the canula met with a resistance and the tapping was discontinued. For that day she was perfectly well, but the following day she complained of feeling sick. The temperature was then found to have suddenly risen to 104°, and the day following it ran up to 105°. No distinct symptoms of peritonitis, however, were found to account for this rise in temperature. From that time she grew better and had no more pain nor rise in temperature. The urine was examined and no albumen nor casts found, but two days before her death she began to suffer from nausea and vomiting. After a violent attack of the latter she was seized with a convulsive attack. Whether it was from syncope or serous apoplexy cannot be determined, as no one was present at the time except an attendant. She seemed to recover somewhat from this attack, but soon after commenced to sink and died in four hours.

The autopsy was performed with the assistance of Dr. Adler. Before opening the trunk the body was so warm that several tests for apparent death were made.

The tumor was found adherent at different portions, but not sufficiently so to interfere with the results of an operation. There was no effusion in the peritoneum of any kind, but in several places, especially in the pelvic and iliac regions, there were patches of very intense injection. The tumor was removed entire; the pedicle was quite small, and was attached to the left ovary. The right ovary was perfectly healthy, but there was a small cyst in the right Fallopian tube. The tumor was remarkable for the multiplicity of the cysts. There were two principal cysts in the centre, the walls of which were lined with smaller cysts, and these in their turn contained still smaller ones. In a few places, where the walls were not covered with cysts, they were found to be quite thin, but these spaces were few and far between. Some cysts contained fluid material, and others were filled with a semi-solid substance.

The immediate cause of death, which it was of importance to take into account in connection with an operation which might have been performed, was in an altogether different part of the body. In the first place, the heart was dilated and very flabby, and filled with small clots entangled in the trabeculæ. In one place, in the right ventricle, a clot had by pressure produced a localized fatty degeneration. Both kidneys were the seats of extensive diffused nephritis. In one of the organs there was a large cyst, with no communication between it and the pelvis. This condition of the kidney must have been produced three or four weeks previous to the death of the patient, and yet the only symptom of renal disease was the vomiting, which occurred only three days before death, and the convulsion, which apparently depended upon cerebral œdema.

Dr. Weir exhibited and described an instrument which has been devised by Trendelenberg, of Berlin, for the purpose of preventing the usual complications and accompaniments of tracheotomy, and other injuries and operations about the throat.

STRANGULATED HERNIA TREATED BY THE ASPIRATOR.

Dr. Erskine Mason exhibited a portion of intestine removed from a patient of Charity Hospital, for the purpose of placing on record a case of strangulated hernia where the aspirator was used, but without accomplishing a reduction. This patient was a man seventy years of age, who stated that he had a hernia of only fourteen days' duration, and that he had been able to reduce it until eight days before he entered the hospital. He had all the symptoms of strangulated hernia on the night that he entered. At that time a careful attempt was first made with taxis, and afterwards, the patient being under ether and thoroughly relaxed, a needle attached to an hypodermic syringe was first introduced into the intestine, and half a drachm of yellow fluid was withdrawn. Immediately after that a large needle (No. 2) was attached to the aspirator, when two ounces and a half of the same kind of fluid was withdrawn, reducing the tumor very considerably. Another attempt was then made with taxis, but without success. He was then seen the following morning by Dr. Hewit, who was prepared to operate. Dr. Mason asked to try the aspirator once more. A No. 2 needle was introduced, and only a few drops were drawn off, but a considerable quantity of gas escaped. The patient being thoroughly under the influence of ether, another unsuccessful attempt at taxis was made. The man's condition was one of great exhaustion, and he was suffering from the symptoms of general peritonitis. Dr. Hewit made up his mind to operate without opening the sac. He exposed the sac and there was no appearance of gangrene; the stricture was found to be at the external ring, and being nicked slightly the strangulation was readily relieved. The patient died some hours after from general peritonitis and exhaustion.

At the autopsy there was no fluid in the sac and no evidences of any perforation of the gut. In conclusion, he remarked that this, with the cases reported by the French surgeons, was the fifth in which the aspirator had been used, but the only one in which the operation had been unsuccessful. The specimen illustrated the fact that the intestine could be perforated without any evil effects resulting.

The Society then went into executive session.

Stated Meeting, April 23, 1873.

Dr. Erskine Mason, President, in the Chair.

CANCER OF BREAST, ETC.

Dr. Finnell presented several specimens. The

first was one of cancer of the breast, removed by Dr. Chas. Phelps from a female, age 55, a patient of St. Vincent's Hospital. The disease was of a year's duration, and the specimen was interesting as exhibiting the cystic variety of cancer.

BRIGHT'S DISEASE AND ANEURISM.

A second set of specimens consisted of the heart and kidneys removed from a male patient, aged 45, who entered St. Vincent's Hospital with the symptoms of Bright's kidney. He lived but a short time. Both kidneys were found extensively diseased, the right being hypertrophied and weighing ten ounces, the left atrophied and weighing but four ounces. Both organs were the seats of advanced granular degeneration. The heart was also markedly hypertrophied, and there was besides an aneurismal dilatation of the ascending aorta, which would probably have ruptured had life been prolonged for any considerable period.

PRIMARY CANCER OF PANCREAS.

A third specimen consisted of a pancreas, interesting as the seat of extensive and primary cancer. He was indebted to Dr. Morton for the opportunity of exhibiting it. The patient was a woman, aged 50, who during the last years of her life suffered from dyspeptic symptoms. A diagnosis of cancer of the stomach was made, the mistake in which was only discovered at the autopsy, the pancreas alone being affected.

In regard to some questions asked by Dr. Garrish in reference to the propriety of operating in cases of cancer of the breast, Dr. Finnell remarked that Dr. Markoe had given all the information of value upon the subject in a published paper; and Dr. J. C. Peters stated that it was the practice in the London Cancer Hospital not to use the knife when the disease was in its active stage. The violation of the latter rule explained in a great measure the speedy reappearance of the disease.

On motion of Dr. KNAPP, the specimen of Dr. Finnell was referred to the committee on microscopy.

ONE OF THE CAUSES OF SUDDEN DEATH.

DR. DRAKE exhibited a specimen showing one of the causes of sudden death. It was removed from a man aged 75, who was admitted into Charity Hospital in October last. On admission, nothing was elicited except that he was very feeble and very cold. He was examined by the house-physician, but no diagnosis was made. The next day, while sitting on the end of the bed, he fell over and suddenly expired.

On opening the chest, the pericardium was found distended with fluid blood. The heart was hypertrophied and the aorta atheromatous. About half an inch above the valves there was a rupture extending almost entirely around the aorta through the internal coat of the artery, thence the blood found its way through the middle coat a little lower down and by a longitudinal rupture, and, lastly, through the external coat, the final rupture occurring at the base of the aorta. There was considerable serum at the base of the brain. The ventricles of the heart were distended with fluid blood; the other organs were healthy, with the exception of the kidneys, which were fatty.

DR. FINNELL remarked that in cases of rapid death the ventricles were always filled with fluid blood, and in cases where death was gradual there were always clots.

DR. PETERS referred to a paper by Dr. Markoe, contributed to the Society in the earliest years of its existence, upon ruptures of aneurisms just above the valves. In that article about fifty cases were collected.

DISSECTING ANEURISM OF THE AORTA.

DR. JANEWAY presented a specimen of dissecting aneurism of the aorta which differed from the one exhibited by Dr. Drake in the position of the rupture and the time of its occurrence previous to the death of the patient.

There was a large laceration of inner coat and part of middle of aorta a little above valves, partially transverse, partly vertical. The edges of this rupture were turned under and slightly adherent to subjacent coats; from this point the blood had formed a channel between layers of middle coat as far as a point a little below opening of left subclavian artery, where a rupture of middle and inner coats about three-fourths of an inch wide allowed the blood to return into cavity of aorta. By gently passing finger into sac it was found that the openings of left carotid and subclavian were nearly closed. The opening of innominate must also have been partly obstructed. The channel was situated along the posterior wall of arch. By this means, undoubtedly, during life, a part, perhaps a third of the blood, travelled through a course, so that it did not reach the upper part of the body, and at same time, by the pressure, the current was also interrupted in the left carotid and subclavian.

The fatal rupture was due to a perforation from the channel described through pericardium, between aorta and pulmonary artery, into pericardiac sac.

The hemiplegia must have been due, as there was no brain-disease, to anæmia due to interrupted circulation on left side, and also to want of blood in main aorta.

AN OLD FRACTURE OF THE HEAD OF THE HUMERUS.

DR. JANEWAY also exhibited a case of old fracture of the head of the humerus with dislocation into the axilla. It was removed from a dissecting-room subject, and was of course without a history. The glenoid cavity was partly filled with fibro-cellular substance, and was occupied by the greater tuberosity; the head of the bone lay on the inner surface of the scapula, just back of the glenoid cavity and below the coracoid process. There was a well-formed false joint just below the glenoid cavity. Dr. J. thought that the head of the bone had probably been fractured in the attempt to reduce the dislocation.

DR. MASON thought it probable that if such a thing had occurred it was during the early life of the patient, when a separation of the epiphysis was possible. He had never heard of fracture of head of bone being produced by careful attempts at reduction.

DR. JANEWAY stated that he had a recollection of two such cases while an interne in Bellevue, but further than this he could give no particulars of age or circumstance.

MUSKET-BALL IN BLADDER, ETC.

DR. JANEWAY lastly presented an interesting specimen, with the following history:—

Joseph Hassenfratz, æt. 51, ad. Dec. 21, 1872. No hereditary tendency. Nineteen years ago accidentally shot in gluteal region, ball entering bladder. Difficulty of urination ever since while standing—only able to do so in sitting or lying position. Thinks he can feel ball rolling in bladder when standing. No bloody urine since injury. Had a number of abscesses in different parts of body when 14 years of age.

Patient anæmic—skin of an earthy color. Increased number of white blood globules. A movable tumor of some size found above left clavicle, evidently enlarged glands. Found faint click by sound in bladder once only.

For ten months has been growing weak; loss of appe-

tite and strength; 3 months ago first noticed tumor in epigastrium; some vomiting at times for ten months and occasional diarrhœa.

Urine, sp. gr. 1012, quantity, over 24 oz. in 24 hours; albuminous; afterwards patient took milk and gruel; vomited occasionally; sank into a dull, sleepy condition, and died of asthma January 5th.

Autopsy, Jan'y 6th, 1873.—Exterior, pale, yellowish color of surface; marked emaciation; moderate œdema of lower extremities. Brain normal. Lungs—slight vesicular emphysema. Heart normal. Liver somewhat enlarged; fatty; a few small carcinomatous nodules in right and left lobes. Spleen normal.

Stomach.—Pyloric extremity the seat of a cylindrical epithelioma involving entire circumference of organ for two inches. The surface of the tumor is unbroken, but depressed slightly in the centre. The edges are raised one-quarter of an inch above surrounding surface and overlapping it. Carcinoma of glands in gastro-hepatic omentum, along aorta back of this, and a few at root of neck on the right side. These latter are some of them as large as a hen's egg.

Kidneys.—Small, atrophied.

Bladder.—Muscular coat slightly hypertrophied—mucous membrane normal. There are three small pouches capable of admitting the end of little finger situated in the posterior wall of bladder, a little above and back of orifice of ureters; a round bullet was lodged in one of these a little deeper than the rest. It was easily displaced and capable of fitting in any of the others. It was of a dull color and only slightly incrusted by urates at one small place. It is somewhat flattened in several places. No signs of the opening by which ball entered bladder could be found. On the hip, over wing of iliac bone, was a cicatrix with loss of muscular tissue, and through this undoubtedly the ball had passed.

PIGMENTAL CHOROIDAL SARCOMA.

Dr. H. Knapp exhibited a specimen with the following history:—The specimen I have here was presented by me some weeks ago at this Society. It is a *pigmented choroidal sarcoma* which had perforated the sclerotic, proliferated in the orbit, was removed by Dr. E. Williams, of Cincinnati, but the patient died, some months later, from a large local relapse and general exhaustion. I recently made an extensive microscopic examination of the specimen, which yielded some very remarkable results—one heretofore undescribed. The elementary parts of the growth were round and spindle-shaped sarcoma-cells, partly pigmented, the pigment evidently derived from the blood, as many of the pigmented cells contained blood-corpuscles. The large primary choroidal tumor presented nothing new. The ciliary processes and the ciliary muscle were transformed into sarcoma tissue. The peculiar elementary parts of the retina were wholly replaced by sarcoma cells. The most interesting feature of the specimen consisted in miliary white deposits, with which the inner surface of the choroid was studded. They were accumulations of round sarcoma cells between the choroidal epithelium and the chorio-capillaris. In some places there were small nests of three or four cells only, crowded between the pigment cells; in others they were larger, and raised or perforated the epithelium, their apices forming those white projecting nodules to which I have called your special attention. They had no connection with one another, but were strewn on otherwise healthy chorond, nor were they in connection with the primary choroidal sarcoma or with the detached, corrugated, and nodular retina. What was [illegible] I have only one explanation for it, viz.: from the small exulcerating nodules of the sarcomatous retina young cells became detached, fell through the liquid in the vitreous chamber upon the choroid, and developed in the new soil into secondary growths. It is *an example of dissemination from a seminium* as elegant as you can wish to see. Virchow has, you know, dwelt upon this mode of propagation of tumors. In the eyeball I have first described it in retinal glioma; for intraocular sarcoma this is the first instance. The propagation of the pseudoplasm from the original choroidal sarcoma to the retina which it encompassed, was by contact, but from the retina to the isolated clusters on the healthy choroid it could only have been by detached seeds *strewn out* upon the choroid.

Stated Meeting, May 14th, 1873.

Dr. Erskine Mason, President, in the Chair.

INTRACAPSULAR FRACTURE OF THE NECK OF THE FEMUR.

Dr. White presented the right femur of a patient in which fracture had taken place at the neck and within the capsule. The patient from whom the specimen was taken was a married woman, American, and about 74 years of age. She was the mother of a large family, and her general health had always been good up to Nov. 30th, 1871, when she had a slight apoplectic attack, followed by a hemiplegia of the left side. Restoration was as good as usually takes place in such cases. The following summer she was able to travel considerably by public conveyance.

Nov. 13th, 1872, she was found lying upon her right side, with the lower extremity of that side under her, and she was perfectly helpless. It was supposed that she had tripped upon the carpet and fallen. She was perfectly rational. The patient was placed in bed, and when I was called to see her the following day, it was found that she still had motion preserved in the left side of the body, the side which had formerly been paralyzed, but that she was perfectly helpless in the right lower extremity. The right foot was everted, there was considerable swelling about the upper portion of the thigh, but she complained more particularly of her back. The right limb appeared to be shortened, but several measurements at the time of the first visit, and subsequently, proved that there was no real shortening. The patient was a woman of large frame, and very fleshy. Such treatment as was thought proper was instituted, without any special treatment being directed towards the fracture. After a few days, she began to suffer from incontinence of urine and fæces; she was unable to use a bed-pan, and although cared for with the greatest faithfulness, bed-sores made their appearance. The patient went on from bad to worse, sank into a typhoid condition, and died from exhaustion at the end of eighty days. Post-mortem was limited to the specimen, and that will show for itself. The fracture was plainly intracapsular.

Dr. Mason inquired whether any ecchymoses were seen on the upper portion of the thigh, or over the ileum, and received the answer from Dr. White that there was something of the usual appearance of the skin after fractures, but not very well marked.

EPITHELIOMA.

Dr. Knapp first presented a patient, from whom he had presented a specimen several months before. The case was one of epithelioma, involving the inner portions of the orbit and its surroundings. The operation which had been performed in this case necessitated the removal of the eyeball, all of the lids, and a

considerable portion of the adjacent skin from the root of the nose, extending about two lines beyond the median line. Nearly all of the inner wall of the orbit, and a greater part of the floor of the orbit were removed. The wound was dressed with a simple bandage, and syringed with lukewarm water. The wound was nearly closed, and the point of interest in the case was, to notice how kindly such an extensive operation might heal. Nothing was used as a dressing except warm water. This case exhibited how plastic covering may be trusted to nature. As soon as no eyeball remains to be protected, plastic operations are unnecessary; but when the eyeball is to be protected, the contrary is the case.

FIBROMA VASCULARE.

Dr. Knapp also presented a tumor which had been removed from the orbit of a child two months old. He first saw the child about three weeks ago, and the parents of the child then said that they had noticed the tumor, or swelling, some two or three weeks. It first began as a small intumescence in the inner portion of the upper lid. It was of a bluish color. The intumescence grew. An oculist was consulted, who decided that it was not of a serious nature, and thought it not advisable to institute any treatment before the child was one year old. When the tumor was seen the first time, the skin of the upper lid was not found involved in the intumescence, but simply pervaded with dilated and tortuous veins. Upon touch, a softish tumor could be felt occupying the inner part of the corner of the orbit. The tumor yielded somewhat to the touch, but it was not possible to empty it by pressure. It had sufficient consistence, that its limits could be easily defined. It was found to extend farther back into the orbit than could be penetrated by the finger.

When the child cried, the tumor was somewhat increased in size, but not very essentially. The same result was also obtained by placing the child suspended by the feet. The eyelid could not be raised at its inner half, the eyeball being visible only at the outer corner of the eye. The tumor was about the size of a filbert. The tumor had been pronounced to be a nevus, but nevus is a too general expression. My diagnosis was *fibroma vasculare*, that is, a tumor made up as orbital cellular tissue is made up, with an undue amount of fat. It was not regarded as being of a cancerous character, because cancer in this region is almost exclusively confined to the retina. It was not regarded as sarcomatous, because sarcomas of the orbit have not been observed in so young children.

Dr. Guldenberg saw the case in consultation and concurred in my diagnosis. The operation was performed yesterday, Drs. Pooley and Turnbull being present. A curved incision was made in the upper lid, following the curve of the fibres of the orbicularis muscle. The hemorrhage which followed the incision through these dilated and tortuous veins was very profuse, but was controlled by lifting the tumor up from below, and making pressure towards the bony wall of the orbit. This elevation of the tumor also gave the secondary advantage of bringing the tumor more prominently to view. An effort was then made to secure the tumor within a clamp, but it being an orbital growth the effort was unsuccessful. The tumor was circumcized by an incision through the healthy cellular tissue, and the hemorrhage which followed was comparatively trifling. The portion now removed consisted of the roundish portion upon the plate. Further examination of the orbit, however, revealed a small tumor in the innermost portion of the wound, and projecting into the orbit. This tumor was perfectly red. It was seized with a pair of tooth forceps, dragged forward, was easily compressed—evidently a more vascular portion of the tumor—and was removed by taking the index finger for a guide, and cutting over it with a pair of scissors, cutting the pedicle, which was composed of hard fibrous tissue containing the afferent and efferent vessels, and stretched deeply into the orbit. The hemorrhage which followed the cutting of the pedicle was profuse, but was easily controlled by the use of the hot iron. After all bleeding had ceased, the cavity of the orbit was cleansed, and the roof of the orbit and about the lachrymal sac were found studded with small lenticular portions of the tumor. These were snipped away, and the surface left perfectly clean and shining like a tendon. Sutures were applied, leaving the inner corner of the wound open, to permit the free escape of all after-secretions. The eye was covered with lint, and a simple flannel bandage applied, which was removed about six hours after the operation, or as soon as it was found that no hemorrhage had occurred. To-day the wound is doing well. The bluish appearance of the skin of the lid has entirely disappeared, which may be regarded as a certain indication that the tumor has all been removed. The nature of the tumor confirmed the diagnosis in all its details—that is, it is a tumor made up of blood-vessels, connective tissue and fat, and nothing else. The front portion of the tumor is made up chiefly of fat, small round cells, and small blood-vessels. The cells were evidently young cells, sometimes were seen with large nuclei and small cell-body, sometimes nothing but nuclei, and then they were seen elongated into spindle-shaped cells, and then into fibres. The back portion of the tumor was made up almost entirely of fibres, and filled with large blood-vessels. In the front portion of the tumor there is, in some places, an immense amount of fat, and this can be seen more particularly in the cells themselves. It is recognized by its lustre and its peculiar appearance. This tumor would be called by some a vascular fibro-lipoma, on account of the quantity of fat which is present, and it may not be improper to retain the term lipoma for this reason. The nature of the tumor is benign. The location of the tumor is not to be regarded as a perfect argument against its malignancy, since cancerous tumors containing all the epitheloid elements may develop upon mucous membranes and upon the skin, but connective tissue and fat is not seen as constituting the elements of a malignant tumor. With regard to the future of the patient, the rapid growth of the tumor indicated a very dangerous condition, and this dangerous condition is confirmed by the histology of the tumor. The large amount of vascularity, the presence of young cell elements in abundance, which are not encapsulated, but are thrown out into neighboring tissues, indicated the elements of rapid growth; so that within the next month, perhaps, the tumor would have protruded the eyeball, encroached upon the outer half of the lid, and, by the formation of new blood-vessels, formed a vascular growth which would have extended into neighboring cavities, and been no longer accessible to an operation. The last resort in such a case, then, would be ligature of the common carotid, and the result of that operation is well known. It was believed that the nature of the tumor and the clinical history justified the early removal of the growth delay of three months, it was thought, would have dangered the child's eye, and perhaps its life. The doctor felt certain that the [illegible]

because its consistence was such as to permit its complete removal without the escape of any portion.

Dr. Janeway exhibited the bullet which was spoken of as being present in a bladder, which he had presented to the Society at one of its former meetings.

The Society then went into Executive Session.

ARTICLES IN OUR EXCHANGES.

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Deficient bladder with wide separation of the pubic bones. Wood. *Ibid.*, March 15.

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Carbolic acid dressings. Crockett, E. *Ibid.*

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Case of rupture of the axillary artery in an attempt to reduce a dislocation of the shoulder. Lister, J. *Ibid.*

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Case of excision of the elbow-joint by a peculiar method. Annandale. *Ibid.*

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Modification of Chassaignac's écraseur for veterinary practice (illustrated). Kopp. *Gaz. Méd. de Strasb.* March.

Several cases of catarrhal nephritis from cold. Béhier. *Gaz. des Hôp.*, March 15.

Stricture of the rectum and its treatment by external rectotomy. Forget. *Ibid.*

Case of retropharyngeal abscess. Violet. *Ibid.*, March 18.

Cases of modified forcible catheterism (continued). Bitot. *Le Bordeau Méd.*, March 9, 16, 26.

Case of hernia strangled by a ring of omentum. Marcano. *Le Mouvement Méd.*, March 1.

Case of cyst of the thyroid body. Postrand. *Ibid.*

Case of fungoid excrescences of the urethra. Vaille. *Ibid.*, March 15.

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An address before the Clinical Society of London. HEWETT, P. *Ibid*, Feb 22.

The circumstances through which the art of obstetrics has passed in Paris to the state of a science, during the sixteenth and seventeenth centuries. MATTEI. *Gaz. Méd. de Paris*, Feb. 22.

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Case of resuscitation in a new-born infant after nearly four hours' artificial respiration. MARSHALL, J. J. *Med. Press & Cir.* March 26.

On the induction of premature labor. BASSET, J. *Br. Med. Jour.*, March 1.

Successful operation of gastrotomy in case of extra-uterine gestation. TAIT, L. *Ibid.*

Abstract of 280 cases of labor attended in private practice by WILLIAM D. HEMPHILL. *The Dublin Jour. of Med. Sci.*, March.

Case of intra-uterine fibroid. KIDD. *Ibid.*

On chronic inflammation of the cervix-uteri, its consequences and treatment. MADDEN, T. M. *Ibid.*

Case of polypus uteri. ATTHILL, L. *Ibid.*

On the use of post-partum binders. CAIRNS. *Edinburgh Med. Jour.*, March.

On the good effects of hydrate of chloral in puerperal eclampsia. BOURDON, M. *Jour. de Méd. et de Chir. Prat.*, March.

Rupture of the cord in precipitate labors, from a medico-legal point of view. *Ibid.*

Case of vaginal enterocele treated successfully with a water-bag. *Ibid.*

Description of a new cephalotribe (illustrated). BAILLY. *Ibid. & Le Mouvement Méd.*, March 26.

Forcing in of the skull during a normal labor. CHABOUX. *Lyon Méd.*, March 30.

Causes of the first respiratory movements of the fœtus. PREVOST. *Gaz. Méd. de Paris*, March 8.

The effect of travelling after marriage in producing

abortion and endometritis. GALLARD. *Gaz. des Hôp.*, March 18.

Case of vaginismus treated by forced dilatation.

Case of fibro-cystic tumor of ovary; operation; recovery. BARRAULT. *La Tribune Méd.*, March 9.

Influence of uterine cancer upon gestation. MONTMEJA. *La France Méd.*, March 5.

Prolapsus uteri. MONTMÉJA. *Ibid.*, March 12.

The action of opium on the gravid uterus. GALICIER. *Ibid.*, March 29.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 19, 1873, to July 3, 1873.

MAGRUDER, D. L., Surgeon.—Granted leave of absence for 60 days, with permission to apply at Headquarters of the Army for an extension of 30 days. S. O. 55, Military Division of the Missouri, June 17, 1873.

HARTSUFF, ALBERT, Assistant Surgeon.—Assigned to duty at Sidney Barracks, Nebraska. S. O. 107, Department of the Platte, June 21, 1873.

WOODHULL, ALFRED A., Assistant Surgeon.—Granted leave of absence for twenty days. S. O. 124, A. G. O., June 20, 1873.

MILLER, GEO. McC., Assistant Surgeon.—When relieved by Assistant Surgeon Delany, to comply with S. O. 113, c. s., A. G. O. S. O. 117, Department of the South, June 25, 1873.

AZPELL, THOS. F., Assistant Surgeon.—Granted leave of absence for six months, on Surgeon's certificate of disability, with permission to go beyond sea. S. O. 124, A. G. O., June 20, 1873.

DELANY, ALFRED, Assistant Surgeon.—Assigned to duty at St. Augustine, Florida. S. O. 117, c. s., Department of the South.

EWEN, C., Assistant Surgeon.—Assigned to duty at Baton Rouge, La. S. O. 95, Department of the Gulf, June 14, 1873.

Medical Items and News.

THE ANDERSON SCHOOL OF NATURAL HISTORY was formally opened by an address, by Professor Louis Agassiz, on Penikese Island, on July 8th. The number of students has been limited to fifty-six, which is but a small proportion of the whole number of applicants. There is scarcely a State in the Union which is not represented, most of the pupils being professors and teachers in normal and high schools and colleges. The building, which is being erected under the direction of Mr. Robert H. Slack, of Boston, and has been framed on the mainland, is to consist of two wings, each 120 feet long by 25 feet wide, united by a large lecture and dining hall. The wings will be two stories in height, the upper floors consisting of dormitories. The lower stories are arranged as laboratories, each wing containing twenty-eight aquariums and working tables, one for each student, who is responsible for their care and good condition. The want of intelligence sufficient to keep his or her aquarium in working order will forfeit the privilege of remaining in the school.

The island is about sixteen miles south of New Bedford, and is about three-fourths of a mile long, by half a mile broad. It comprises about one hundred acres, and is the most fertile of the group of Elizabeth Islands, to which it belongs, and is valued at $100,000.

Mr. C. W. Galloupe, of Boston, has presented the school with a yacht of eighty tons, worth $30,000. The following scientists will assist Professor Agassiz in his project: Dr. Burt G. Wilder, of Cornell Univ.; Dr. A. S. Packard, of Peabody Academy of Science, Salem; Count Pourtales, of the Coast Survey; Prof. Waterhouse Hawkins, of England; Paulus Roetter, artist of the Museum at Cambridge; Prof. Mitchell, of the Coast Survey; Prof. J. S. Lovering, of Harvard University; Prof. F. W. Putnam, of Peabody Acad. of Sci.; Prof. N. S. Shaler, of Harvard, who was the first proposer of this scheme, and who is at present in Europe; Prof. Arnold Guyot, of Princeton College, N. J.; and Prof. Brown-Séquard, of this city.

We take from the *New York Tribune* the above facts, and the following extract from a circular addressed by Prof. Agassiz for applicants admission to the school.

"I must make hard work a condition of continued connection with the School, and I desire particularly to impress it upon the applicants for admission, that Penikese Island is not to be regarded as a summer resort for relaxation. I do not propose to give much instruction in matters which may be learned from books; nor do I wish books to be read during the summer session of the school on Penikese Island. I want, on the contrary, to prepare those who attend *to observe for themselves*, that they may hereafter be able to make the most of their opportunities for study in nature, in whatever part of the country they may reside, as there are hardly two adjoining school-districts in which the same objects may be collected for examination.

"It will no doubt appear to many a wearisome process to sit for hours before a specimen, without any but a very general direction what to do with it. I would therefore advise all those who wish only to be taught natural history in the way in which it is generally taught, to give up their intention of joining the Anderson School.

"My plan will further imply the obligation, on the part of all present, of making special collections to carry home and use as a basis for teaching others; in the same way I propose to teach myself with the assistance of many of my scientific friends. My object in adopting this course is not only to give what I consider to be the best instruction, but also to show how teaching should be conducted by competent teachers."

PROFESSOR D. WARREN BRICKELL, formerly of the University of Louisiana, has been appointed one of the Professors of Obstetrics and Diseases of Women and Children, and Clinical Midwifery, in the Bellevue Hospital Medical College.

THE YELLOW FEVER is abating at Rio Janeiro, but becoming more virulent at West India ports. In Matanzas it was especially fatal during the past week: the first cases appearing on the schooner James M. Riley, on which eight deaths occurred, including Captain Coffin. The brig Mabel (from Matanzas for England) was spoken at sea with the captain dead on board. It is somewhat less in Havana, though still occurring. Of other parts there are still cases at Montevideo, Para, and Bahia. No cholera, as yet, has appeared in New York harbor or city.

RECORD OF SCHOONER JAMES M. RILEY.—Arrived in Havana with cargo of hay and paving stones, May 6th, and lay at the quay. May 18th, Frank M. Kelly was taken sick, and died on the 22d, with yellow fever. She left Havana June 2d, with steward, Geo. M. Ficket, sick, who died at sea, June 4th, as also did Chas. Winters,

seaman. The mate, Mr. Eaton, who was in charge of the vessel on her arrival here, was left in hospital at Havana, with yellow fever. Arrived in Matanzas June 5th. June 18th, Captain Alphonso S. Coffin was taken sick, and died the 21st. June 18th, O. Simmonson, a seaman, was taken to hospital, and died the 22d. June 20th, Daniel Pinkham was taken sick, and died 25th. Left Matanzas for New York, June 26th. July 1st, T. Bordel, a Dane, seaman, was taken sick, and died July 3d. All well on arrival.

The late Dr. Robert Nelson.—The late Dr. Nelson, of Staten Island, in 1829 was the first surgeon in Canada to ligature the carotid artery. Before he left Montreal, and while a young man, he operated sixty-five times for urinary calculi very successfully. He translated "Hufeland's System of Medicine," also published a treatise, in pamphlet form, on "Ovariotomy."

The Pennsylvania College of Dentistry will not, in future, receive any female students.

Statistics show that hydrophobia is periodic in character.

Society for Relief of the Ruptured and Crippled, N. Y.—The annual meeting of this Society was held May 7, 1873, at the Hospital, corner Forty-second street and Lexington avenue. During the past year 4,023 patients were treated, of whom 290 were in-patients. Officers were elected for the ensuing year.

New York Medical Societies.—The officers of the N. Y. Medical Union for 1873 are as follows: *President*, Dr. J. E. Janvrin; *Vice-President*, Dr. A. H. Smith; *Secretary*, Dr. Wm. H. Hall; *Treasurer*, Dr. Ellsworth Eliot.

The officers of the Harlem Medical Association for 1873 are: *President*, Dr. John Shrady; *Vice-President*, Dr. Malcolm McLean; *Secretary*, Dr. Henry G. Forbes; *Treasurer*, Henry T. Peirce; *Trustees*, Drs. H. H. Gregory, H. L. Sheldon, and Henry F. Patch.

The Yonkers Medical Association has elected the following officers for 1873: *President*, Dr. H. M. Sprague, of Fordham; *Vice-President*, Dr. George F. Jackson, of Carmansville; *Secretary*, Dr. T. R. Pooley, of N. Y.; *Treasurer*, Dr. S. G. Perry, of Yonkers; *Trustees*, Drs. Reinfelder, Jenkins and Varian. The Society has twenty active and six honorary members.

Faxton.—The Hon. T. S. Faxton, of Utica, has given fifty thousand dollars for founding a hospital within the limits of that city, to be called "The Utica Faxton Hospital." Probably about $100,000 will be added to the original amount.

Insane Retreat, Hartford, Conn.—Dr. James H. Denny, for many years assistant physician at the Retreat, has been made Superintendent of this flourishing institution.

The Meteor.—The patients in the Alabama Insane Asylum edit and print a paper called *The Meteor*. The editor of the *American Journal of Insanity* remarks that the patients of the Vermont State Asylum published the first periodical of the kind in this country. This was soon followed by the *Opal*, edited and printed by the patients of the N. Y. State Asylum, at Utica, which was continued for nine years.

Leprosy.—Shocking forms of leprosy are met with all over Palestine, as of old. One street is especially assigned the lepers in Jerusalem. There are two institutions for their reception in Damascus, one for each sex. Through the day they wander about without restraint, but are required to be home at night. Even in their horrible condition they intermarry among themselves, and some live to an advanced old age. The same disease has been carried to the West India Islands and Newfoundland, requiring special legislation to keep it from being propagated.

Among the 11,000 cases of skin-disease recorded by McCall Anderson, only three cases of Elephantiasis Græcorum (true leprosy) were noted, one of which occurred among the hospital and two among the private patients. One was a young Scotch Highlander, one a boy from India, and the other, a young lady of fifteen, came from Jamaica.

The Process of Taking Cold.—Daily experience teaches the medical practitioner that persons who guard most anxiously against every possible chance of taking cold are most frequently its victims. Geiger, in an article on the mortality of children at Würtzburg, Germany, translated by Ch. Rauschenberg, M.D., Atlanta, Ga., shows that diseases of the respiratory organs cause, in the first year of life, the death of relatively many more legitimate than illegitimate children; while the contrary is true of diseases of nutrition, proving that the too great care of fond mothers to their offspring frequently produces what it is intended to prevent.

Science as Known to the Ancients.—In Egypt mummies have been found with teeth filled with gold, and in Quito a skeleton has been discovered with false teeth secured to the cheekbone by gold wire. In the museum at Naples, among some of the surgical instruments discovered at Pompeii, there is a fac-simile of Sims's speculum. In the ruins of Nineveh, Layard found several magnifying glasses.

Manhattan Eye and Ear Hospital, N. Y.—The third annual report of this Institution, for 1873, gives the following particulars:—Since the Hospital was opened, Oct. 15, 1869, 6,069 patients have been treated, of whom 4,323 were suffering from diseases of the eye, 1,484 from diseases of the ear, and 31 from diseases of the throat; 231 cases not diagnosticated. During the same period 1,158 operations have been performed upon the eye, and 116 upon the ear; total, 1,274. During the past year 2,394 cases of diseases of the eye, ear, and throat have been treated. Number of surgical operations performed, 508. Of the 2,394 cases 1,272 were males and 1,122 females; 1,344 were born in United States, 779 in Ireland, 97 in England, 95 in Germany, 29 in Scotland, and 50 were of 15 other nationalities. *Cataract Operations*:—In the 7 corneal flap extractions, 6 were successes and one a total loss. Three cases were operated upon by Graefe's method modified, and the result was as follows: In the first case, $V=\frac{5}{40}$; in the second, $V=\frac{4}{100}$; in the third, $V=\frac{2}{40}$. In 9 cases the cataract was extracted by Liebreich's Extraction. The first two cases were total losses; the vision in the remaining 7 resulted as follows: 1st case, $V=\frac{2}{40}$; 2d case, $V=\frac{2}{20}$; 3d case, $V=\frac{2}{40}$; 4th case, good recovery, will need secondary operation; 5th case, $V=\frac{2}{40}$; 6th case, $V=\frac{1}{20}$; 7th case, $V=\frac{1}{50}$, and still improving. In 21 cases of extraction, 18 were successful, and three were total failures.

Dr. Edward Curtis has resigned the office of Microscopist, and Dr. Henry C. Eno has been elected to fill his place, with the title of Pathologist. The Directors have secured the services of Mrs. Bertram Thorpe as Matron, who has had the benefit of instruction in nursing in the University College and Queen Charlotte's Lying in Hospitals, London. *Medical Officers*:—Drs. C. R. Agnew, E. G. Loring, Jr., D. B. St. John Roosa, O. D. Pomeroy, C. I. Pardee, F. R. Sturgis, A. H. Smith, and David Webster, the latter being House-Surgeon.

A New Physiological Institute in Berlin.—On the 1st of April the foundation-stone of a new physiological institute was laid at Berlin. It is to consist of a large amphitheatre, several smaller lecture-rooms, a library, dwellings for the assistants and servants, and five laboratories, viz.: one for physiological chemistry, one for physical physiology, one for vivisections, one for microscopy and embryology, and one for the private use of the professors. There are also to be dark rooms for optical experiments, an aviary, and places for keeping animals for experiment. In addition there will be a dwelling and laboratory for Helmholtz, a laboratory of inorganic chemistry, and one for pharmacology, under the direction of Liebreich. The building is to stand in a garden, thus being free from the noise of the streets and well supplied with light and air.

Education of Midwives in Russia.—The Russian government has established the following course of study for midwives:—

First year.—Normal anatomy, including histology of the normal tissues; physics, expounded in their application to the physiology of health and disease, and the hygiene of women and children; botany, with reference to materia medica and pharmacy; and anatomy, especially with reference to women and children.

Second year.—Physiology, medicine, chemistry, pathology, methods of investigating disease, pharmacy, and dispensing. Physiology and pathology shall have special reference to the organization of women and children, pregnancy, and the history of development. Pharmacy is to have special attention devoted to it, as female students will be under the necessity of mixing their own medicines in villages where only small druggists exist.

Third year.—Pathological anatomy, histology, midwifery, the teaching of diseases of women and children will be taught clinically from the beginning. Clinical instruction is confined to the most frequent forms of disease. In the surgical *clinique*, the pupils ought to make themselves acquainted with fractures and dislocations, wounds, and the art of bandaging. The study of nervous diseases and those of the eyes is important; the first with regard to the ailments of women (gynæcology), and the last to those of children.

Fourth year.—Operations in midwifery. General practice in midwifery, hygiene, clinical instruction in diseases of women and children, syphilitic and skin diseases. Operative midwifery must include the use of forceps, turning, etc., with practical training of the students. The duty of an expert in midwifery is confined to the explanation of forensic medicine, referring to the female sex and their offspring: *e.g.*, questions relating to virginity, seduction, pregnancy, miscarriage, the capacity of life of the fœtus, the viability of the child at time of birth, etc. Hygiene is to be studied principally with regard to the health of the child after birth, and of the woman during the periods of development, pregnancy and parturition, and after the cessation of the menses.

Each yearly course lasts eight months, beginning in September and ending in May. The number of lectures may not consist of less than three a day.

From the establishment of this course of instruction the Russian government anticipate the following results: 1. The lives of many women in childbirth will be saved which are lost in Russia from inadequate medical attendance; 2. The lives of many children and people of all ages will be preserved among the lower orders, which are lost through superstition and prejudice; 3. An efficient number of properly constituted midwives will be spread over the country; 4. Such a training will make women very useful as nurses in war, where they are needed, not merely for wounds, but the various disorders which a life in camp engenders; 5. If women are properly educated in medicine, they will be useful in druggists' shops, etc., and thus the services of many men will be at the disposal of the state, whose places they could fill.—*British Medical Journal*, April 12.

Insanity in the State of New York.—Dr. Charles S. Hoyt, Secretary of the Board of Public Charities of New York State, at a late meeting of the Medical Society of the County of Albany, stated that in 1871 the total number of insane in this State was 6,775. Of these 1,582 were in the custody of friends, 1,093 in State institutions, 312 in private institutions, 3,552 in city and county poor-houses, and 161 in institutions in other States. During the year 1872, 1,678 new cases of insanity occurred, or 1 to every 2,612 of population. In the same time there were 761 recoveries and 502 deaths among the insane of the State.

Medical Library and Journal Association of New York.—At the stated reunion, held April 11, 1873, Dr. J. C. Peters, President, in the chair, Dr. Paul Munde read a paper on the craniocast, and Dr. E. R. Pulling on respiration; and at the meeting May 16, 1873, Dr. D. B. St. John Roosa read a paper on "The Consequences of Chronic Suppuration of the Middle Ear." Drs. Pomeroy, Post, and Hackley participated in the discussion.

A Prize in Materia Medica.—The Society of Medicine, Surgery, and Pharmacy of Toulouse offers a gold medal of the value of 300 francs, as the prize of 1874, for the best essay on the following subject: "The Purity of the Chemical Medical Agents most frequently employed; the most certain and easy Methods of Recognizing their Purity."

Galvanic Ecraseur.—According to the London correspondent of the *Canada Medical and Surgical Journal*, Mr. Erichsen says that the galvanic écraseur is the most beautiful adaptation of science to surgery of late years. He has removed several tongues with it, and the penis also, and always with the most satisfactory results as an operation.

Royal College of Surgeons.—One of the examiners of this institution is reported to have said that those candidates who recently went up for their primary examination of the M.R.C.S. were the worst he ever remembered. Out of 105 who presented themselves, 46 were sent back to their studies, and only a few got first-class marks.

Success in Ovariotomy.—Dr. Lewis Rogers (*Am. Practitioner*, April, 1873), in a paper on "Facts and Reminiscences of the Medical History of Kentucky," calls attention to the fact that Dr. Taylor Bradford, of Augusta, Ky., has already attained in his cases of ovariotomy the 90 per cent. success which Spencer Wells thinks *may be* ultimately attained.

The First Operation of Lithotripsy in America.—Dr. Alban Goldsmith, the first assistant to Dr. McDowell in many of his ovariotomies, made the first operation of lithotripsy ever performed in Kentucky or in the United States. It occurred in 1829.

Rothschild.—Baron Adolphe de Rothschild proposes to build and endow, at Geneva, Switzerland, a hospital for eye-diseases, at a cost of $100,000.

THE FIRST ENGLISH OBSTETRICAL WRITER.—The first English midwife who appeared as an obstetrical writer was Mrs. Jane Sharp, of London, whose work was published in 1671, under the name of the "Midwives' Book"—a duodecimo of 418 pages.

EXCISION OF THE ANKLE-JOINT.—The first English surgeon who performed the difficult operation of excision of the ankle-joint was Henry Hancock, senior surgeon of Charing Cross Hospital, and President of the Royal College of Surgeons, London.

LIFE-SAVING SOCIETY OF NEW YORK.—A society of this character has recently been inaugurated in New York city, to promote the rescue of persons in peril from drowning, from fire, and from other accidents. The medical officers are as follows: *Vice-President*, Dr. E. R. Peaslee; *Corresponding Secretary*, Dr. Benjamin Howard; *Executive Committee*, Drs. Frank H. Hamilton and Alfred C. Post; *Board of Directors*, Drs. B. Howard, A. C. Post, T. G. Thomas, E. R. Peaslee, Marion Sims, C. R. Agnew, Wm. A. Hammond, A. Flint, Jr., F. H. Hamilton, and Fordyce Barker. Prof. Theo. W. Dwight, *President*.

TAYLOR.—Rev. W. G. Taylor, M.D., late of Camden, New Jersey, has been appointed by the Board of Foreign Missions as physician to the Gaboon Mission, on the western coast of Africa.

UNIVERSITY HOSPITAL, PHILADELPHIA.—The trustees of this new hospital have nearly six acres of ground, free from all incumbrance, and a building fund, given by the State, of about $200,000. A contribution of $350,000 will also, probably, be raised. The structure will be 220 feet in length.

REFRACTION AND ACCOMMODATION.—"A Treatise on the Diseases of Refraction and Accommodation," is the title of an interesting *résumé* by H. S. Fenner, M.D., of Louisville, Ky., published in the May number of the *Richmond and Louisville Medical Journal*, and reprinted in pamphlet form.

MEDICAL EDUCATION.—Prof. Alfred Stillé, in his address before the Society of the Alumni of the Medical Department of the University of Pennsylvania, at its annual meeting, March 12, 1873, gives a practical view of "Medical Education: What it is, and what it might be made," and strongly favors the necessity of providing endowments for its professors' chairs. Eight, he remarks, would be a minimum number of professors; but that number should include a Professor of General Pathology and Morbid Anatomy. This brochure of 34 pages contains much that is interesting to medical men who are desirous of elevating the standard of medical teaching in this country.

LOGIC OF MEDICINE.—The learned essay on "The Logic of Medicine," by Edward S. Dunster, M.D., which was originally delivered before the New York Academy of Medicine, and published in full in the *N. Y. Medical Journal*, reappears in the form of a brochure, by order of the Academy.

THE OBSTETRICAL JOURNAL OF GREAT BRITAIN AND IRELAND.—The first number of this new monthly obstetrical journal, which appeared April 1st, is dedicated to William Harvey, the father of obstetrics, and contains original papers by Drs. Robert Barnes, Gustavus C. P. Murray, Andrew Inglis, Thomas Chambers, and J. H. Aveling; reports of hospital practice, notices and reviews of books, abstracts of societies' proceedings, and obstetrical summary, etc., comprising 72 pages. An American supplement of 16 pages, edited by William F. Jenks, M.D., Obstetric Physician to the Philadelphia Dispensary, is appended. James H. Aveling, M.D., and Alfred Wiltshire, M.D., are the English editors. Henry C. Lea, of Philadelphia, is the American publisher.

SOCIAL SCIENCE ASSOCIATION.—Dr. Edward Jarvis, at a late meeting of this Association, held in Boston, Mass., read a paper on the "Influence of Crime," in which he drew from statistics the deduction that, while the crimes of males are against persons and property in two instances out of three, the crimes of females were sensual and against themselves in the ratio of 70 per cent.

DEPILATORY MIXTURE.—A new depilatory mixture is recommended by Prof. Boettger, consisting of one part of crystallized sulphydrate of sodium, and three parts of prepared chalk. Mixed with water, and applied to the skin, it effects the easy removal of hair.—*Med. and Surg. Reporter*.

EMOTIONAL INSANITY.—At a recent meting of the New York Medico-Legal Society, David Dudley Field Esq., in discoursing upon "Emotional Insanity," concluded as follows:—

Children under the age of discretion, idiots and imbeciles are not within the discipline of criminal law.

The mental unsoundness of other persons, commonly designated as insanity or mania, is in itself, or is attended by, disease of the brain, so that no heat of mere passion, and no degree of mere frenzy, can in any just sense be pronounced insanity by either of the professions.

That neither perceptional nor emotional insanity by itself, nor both together, can be accepted as excuse for criminal responsibility.

That intellectual or volitional insanity absolves from criminal responsibility when, and only when, the reason has lost either the power of choice or the power of controlling the will.

That in every case of acquittal on the ground of insanity, the defendant should be forthwith placed in a lunatic asylum, and there kept until it is proved that he is restored to such a state of sanity as to remove all apprehension of a recurrence of the disease.

That the present gradation of punishments is unsuited to the present condition of medical learning, and a change is required which shall make the law punish not only according to the harmfulness of the outward act, but according to the quality of the inward spring of action.

New Publications.

BOOKS RECEIVED.

CHEMISTRY, MEDICAL AND PHARMACEUTICAL, including Chemistry of the U. S. Pharmacopœia, &c. &c. By JOHN ATTFIELD, Ph. D., F.C.S., Prof. Pract. Chem. to Pharm. Soc. Great Britain. Fifth ed. Phila.: H. C. Lea. 1873.

INTRODUCTION TO THE STUDY OF CLINICAL MEDICINE, &c. By OCTAVIUS STURGES, M.D., Cantab. Phila.: H. C. Lea. 1873.

ON THE TREATMENT OF DISEASES OF THE SKIN, &c. By Dr. MCCALL ANDERSON, Prof. Pract. Med., Anderson University. Phila.: H. C. Lea. 1873.

CLINICAL REPORTS FROM PRIVATE PRACTICE. By JOHN CLAIBORNE, A.M., M.D., etc. Petersburg, Va. 1873.

CONTRIBUTIONS TO PRACTICAL SURGERY. By GEO. W. NORRIS, M.D., late Surg. to Penn. Hosp. Phila.: Lindsay & Blakiston. 1873.

PHARMACEUTICAL LEXICON. A Dictionary of Pharmaceutical Science, &c. By H. V. SWERINGEN. Phila.: Lindsay & Blakiston. 1873.

Medical Department of Life Insurance.

LONGEVITY;

OR, THE RELATIVE VIABILITY OF THE SEXES: PARTICULARLY WITH REGARD TO THE RELATIVE LIABILITY TO THE INHERITANCE OF CERTAIN TRANSMITTED DISEASES.—CONSIDERED IN RELATION TO THE SELECTION OF LIFE-INSURANCE RISKS, WITH A VIEW OF EXHIBITING THE UNJUSTNESS OF THE PRACTICE OF CHARGING HIGHER RATES FOR WOMEN. ILLUSTRATED, IN PART, BY THE STATISTICS OF PHILADELPHIA, FOR THE ELEVEN YEARS ENDING 1871.*

By JOHN STOCKTON HOUGH, M.D.

Part II.

"Feminæ præ Viris Longeviores."†

It is useful, in this connection, to inquire whether men are more likely to have hereditary diseases engrafted on their constitution than women, and it is for this purpose that I have made careful calculations of the proportion of males to females dying of the various affections named in the table.

OLD AGE.

Of the persons dying of "old age" (60 to 110 years) 65.17 per cent. were women, and only 34.83 per cent. men. In the free white population of the United States, there were, in 1830, 2,041 males and 2,523 females living from 90 to 100 years of age, or in the proportion of 80.88 to 100. In 1840 there were of the same ages, 2,143 males and 3,145 females, or in the proportion of 76.72 to 100. In 1850, 5,183 males and 6,512 females attained these ages, or 79.57 males to 100 females. In 1860, 5,854 males and 7,924 females, or as 73.86 males to 100 females. In 1870, 6,922 males and 9,731 females, or 71.13 males to 100 females attained these ages. It is curious to note that of the persons aged 100 years and above in 1830, 301 were males, and 238 females, or in the proportion of 126.47 to 100. In 1840 the proportion for the same ages was (432 to 285) 151.59 to 100. It would appear from this, that although the mean average duration of life from 90 years up is greater for women than men, yet in extreme ages (above 100) the men exceed the women. Of 46 persons whose names appear on the records of extreme longevity (from 130 to 176 years) only 10 were women, though the one who attained the greatest age (176 years) was a woman.

In the United States, in 1850, 1,077 males and 1,478 females attained to 100 years and above. In 1860, 1,233 males and 1,720 females. In 1870, 1,286 males and 2,236 females. Both of these decades of ages show a growing increase in the proportion of females attaining extreme ages.

Of 1,712 persons attaining 100 years and above, 670 were females and 1,042 males, or in the proportion of 1,000 males to 642 females. ‡

In the city of Providence§ for the 15 years ending 1870, 202 men and 445 women died from old age, or 45.37 men to 100 women. In England, 1857, 11,323 males and 15,524 females died of old age, or 728 men to 1,000 women, the proportion of sexes in the living population being 966 males to 1,000 females.

ZYMOTIC DISEASES.

Zymotic diseases are generally more fatal among males than females; in England, 1856, 1,248 males and 1,029 females died of small-pox, or in the proportion of 1,212 males to 1,000 females. In Philadelphia (1871), 1,016 males and 863 females died of this disease, or in the proportion of 1,176 males to 1,000 females; under 20 years of age, there were 578 males and 581 females; above 20 years of age, 438 males to 282 females, or 1,553 males to 1,000 females. In England (1856), 137 males and 90 females died of purpura and scurvy; 599 men and 477 females died of rheumatic fever; 4 males and 1 female of hydrophobia; 61 males and 33 females of mumps; 7 males and 1 female of glanders. Two men to one woman died of cholera maligna in Philadelphia, in 1834.

SUDDEN DEATHS.

Devergie* says the difference in the proportion in the sexes of those dying suddenly is enormous, there being but 5 women out of 44 cases, or 100 females to 780 men.

In England, 1851, there were 1,917 males and 1,486 females who died suddenly from unascertained causes, in the proportion of 1,289 to 1,000.

MURDER, VIOLENCE, AND SUICIDE.

Nearly 4½ times as many males as females meet a violent death, either at their own hands or by an assassin. In France from 1835 to 1849, on an average, 3 men to 1 woman committed suicide, the proportion being very nearly the same for each year. The U. S. census of 1870 gives 17,517 male and 5,223 female decedents from accidents and injuries. Of these 1,080 men and 285 women committed suicide, or 395 males to 100 females. 1,907 men were murdered, and only 150 women, while 31 men were executed.

INTEMPERANCE.

A much larger proportion of deaths from intemperance occur among the male sex, 136.84 to 100, or taking the proportion of the sexes in the population into consideration, there are probably two men to one woman among the decedents from this cause.

WOUNDS.

Seventeen men died from the effects of wounds to every woman dead from the same cause.

APOPLEXY.

1.20 per cent. of all the deaths were ascribed to apoplexy; of these, there were 123.25 males to every 100 females, or taking the proportion of the sexes in the adult population into account, more than 3 men to 2 women. This is in keeping with the fact of a more frequent sanguine temperament among men than among women; men also have a larger quantity of blood, having a higher specific gravity, and a larger proportion of red corpuscles and other solid constituents, as determined by Dennis, Foedisch, and Le Canu. These facts taken in connection with the function of menstruation in the woman, and greater exposure of men to the elements, would appear to be sufficient to explain the difference in the mortality from this cause.

GOUT.

Although Hippocrates and other sages have said that women, children, and eunuchs do not have

* The writer, in the course of this article, has enunciated theories, some of which are novel and original, and while he fully believes them to be true, he desires it to be distinctly understood that they are not *necessarily* recognized by scientists generally; and further, the scope of this article gives him no opportunity to prove his position, which he hopes to do at some future time.

† Acta Medic. Berol. Dec. I, vol. viii., p. 91. Dec. II, vol. x., p. 59. Cited in Plouequet's Literatura Medica, v. 2, Art. Longevitas.

‡ Easton on Human Longevity, etc. Salisbury, 1799, 8vo. pp. 292.

§ Dr. E. M. Snow's Reports to the Board of Health.

* Annales D' Hygiene Pub., etc., t. XX., 1838, p. 177

gout, yet we find in our reports a few deaths of females from this cause, in the proportion of about 1 female to 3 males. In England (1856), 221 males and 39 females died of this disease. Of other constitutional diseases, 825 males and 634 females died of abscess; 60 males and 13 females died of fistula.

LOCAL DISEASES.

In England (1856), 78,152 males and 71,759 females died of local diseases, or 1,084 males to 1,000 females.

DISEASES OF URINARY ORGANS.

In England (1856), 3,161 males and 1,166 females died of these affections, or 271 males to 100 females; of diabetes, 271 men to 159 women.

HYDROCEPHALUS.

In England (1856), 4,161 males and 3,138 females died of this disease.

WHOOPING-COUGH.

This affection is uniformly more fatal among females than males, but as the decedents from this cause are nearly always minors, it does not affect the question under consideration.

AFFECTIONS OF THE HEART.

The deaths reported from "diseases," "inflammation," and "congestion" of the heart, constitute 2.66 per cent. of the total number of deaths from all causes whatever. By far the larger proportion, 2.15 per cent., of these were adults above 20 years of age. Among those dying before the 20th year of age, there were about 3 boys to 2 girls; while of those dying at 20 years and above there were 95.55 men to 100 women; and when we take into consideration the fact that there are probably not more than 85 men to every 100 women above 20 years of age in the general population, we find that there is actually an excess of 5.4 per cent. of males over females among the adults dying from these affections. It is worthy of observation, however, that the percentage of excess of male deaths among the adults of this class is smaller than that for any of the other affections under consideration, except cancer. Dr. Geo. H. Norris, in his article on Aneurism of the Subclavian Artery, gives 59 cases in which the subjects were males, and only 7 females. (*Amer. Jour. Med. Sci.*, July, 1845.) In England (1856), 254 men and 84 women died of aneurism.

AFFECTIONS OF THE BRAIN.

5.21 per cent. of all the deaths reported were from "diseases," "inflammation," and "congestion" of the brain. About two-fifths of the number were under twenty years of age, and the proportion of males to females was as 132.13 to 100, for all ages, 118.45 to 100 for those dying under 20 years, and 324.50 to 100 for those 20 years and above. This proportion of 13 men to every 4 women dying of these affections after the 20th year, is certainly very large, and would seem to indicate some other causes than greater exposure to the elements, and dangerous and difficult occupation. Notwithstanding this much larger proportion of adult males among the decedents from affections of the brain, yet there are more women insane than men. Though there be more of genius among men, there are also more idiots, deaf, blind and dumb, than among women.

SCROFULA.

This hereditary malady is much more frequently fatal among males than females, even after they have reached their 20th year. In England (1857), 1,552 males and 1,229 females died from this cause, or 1,262 males to 1,000 females.

PARALYSIS.

1.26 per cent. of all the deaths were ascribed to this malady; of these, 122.92 were males to every 100 females. Nearly all of those cases were above 20 years, most of them far advanced in life, yet the proportion of males is very large, the excess amounting to about 17 per cent.

INFLAMMATORY AFFECTIONS OF ORGANS OF RESPIRATION.

In England (1856), 28,400 males and 24,508 females, or as 1,158 males to 1,000 females, died from these affections.

PULMONARY CONSUMPTION.

Every inquiry about this very fatal disease must be both interesting and useful, for a very large proportion of life-risks die of this malady, and every addition to our knowledge of the laws of transmission and exhibition of its effects must be exceedingly valuable. 12.78 per cent. of all the deaths occurring in Philadelphia during the period named were from this cause; of these, 99.15 were males to every 100 females. Comparatively few (1.78 per cent.) die under 20 years; but the proportion of females among the decedents below this age is very large (4 to 3), as compared with the proportion after the 20th year, when the males have an excess of 9.7 per cent. For the years 1832–3–4, the excess of female decedents amounted to 17.3 per cent. 11 per cent. of all the deaths from whatever cause are persons above 20 years of age, from consumption of the lungs. The deaths from pulmonary consumption in the city of Paris,* for the ten years ending 1848, numbered 20,723, of which 63.67 were males to every 100 females. Of the 19,409 deaths from pulmonary catarrh in the same city during this decade, 76.65 were males to 100 females. These proportions are for all ages, and we have seen in the deaths occurring in Philadelphia, that the proportion of females was much greater for ages below 20 years than for those above that age, and then the proportion of females in the adult population of Paris is much greater than in Philadelphia, which would, I think, finally give an excess in the proportion of males in the deaths from this affection. In the State of Michigan,† in the year 1870, there were 3,000 deaths from consumption, 86.79 of which were of males to every 100 females. Where an entire State is included in the returns, the greater mortality of women from all causes in country districts, is probably not without its effect on consumptives. In the city of Providence, R. I.,‡ for the 15 years ending 1870, there were 2,957 deaths from pulmonary consumption, or 18.70 per cent. of the total mortality from all specified causes; of these 45.56 per cent. were males, and 54.44 per cent. females, or 83.66 males to 100 females; there being 89.44 males to 100 females in the population.

The following table I have elaborated from the Registrar's (Mr. Chambers's) report:—

Age and percentage of decedents from consumption of the lungs, in Philadelphia, for the 11 years from January 1st, 1861, to December 31st, 1871:—

Average age of all decedents from consumption	35.57 years
Average age of all decedents from consumption dying after the 20th year	39.41 "

* M. Trébuchet, in Annales D'Hygiène Pub., etc., v. xlvi., p. 6-12.
† Dr. Baker's compilation of the Statistics of Michigan, 1870, p. 342.
‡ Dr E. M. Snow's Regst. Rept., 1870, p. 46.

Average age of all decedents from consumption dying after the 30th year	46.77	"
Average age of all decedents from consumption dying after the 40th year	51.73	"
Average age of all decedents from consumption dying after the 50th year	58.51	"

The percentage dying at different ages was as follows:—

Under 1 year.	1 to 2.	2 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.
1.73.	1.06.	1.34.	.99.	1.29.	6.90.	30.39.
30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.
24.21.	16.94.	8.95.	5.28.	2.19.	.34.	.019.

In England and Wales, according to Dr. Farr,* consumption (phthisis) is most fatal to women, the difference being greatest between the ages of 15 and 55 years. For the 7 years ending 1854, 166,741 males and 187,801 females died, or 2.70 males died annually, to every 1,000 living, and 2.92 females, being an excess of .22 for females.

From	0–5	years	there	was	an	excess	of	.08 for males.
"	5–10	"	"	"	"	"	"	.08 " females.
"	10–15	"	"	"	"	"	"	.57 " "
"	15–25	"	"	"	"	"	"	.72 " "
"	25–35	"	"	"	"	"	"	.67 " "
"	35–45	"	"	"	"	"	"	.23 " "
"	45–55	"	"	"	"	"	"	.70 " males.
"	55–65	"	"	"	"	"	"	.88 " "
"	65–75	"	"	"	"	"	"	.74 " "
"	75–85	"	"	"	"	"	"	.18 " "
"	85–95	"	"	"	"	"	"	.07 " "
"	95 and upw.	"	"	"	"	"	"	.20 " females.

This table indicates that females are more likely to die of consumption than males, from puberty to the menopause, but after the 45th year, more males succumb to this cause than females; until 95 years is reached, when it is again more fatal among females. For all ages there is an excess of female decedents in the proportion of 1,000 females to 887 males, but it must not be forgotten that there is an excess of females in the population of all ages (1,000 females to 966 males), and of the ages of decedents from this cause the proportion is probably in favor of females, so that of the *adults* dying of this affection, as indicated by the above table, there is a larger proportion of males than females; for the excess of females, among the decedents from the 20th to the 45th year, is more than counterbalanced by the excess of males above the 45th year.

Dr. J. V. C. Smith says that "females in cities are more prone to consumption than those in the country." In the State of New York, 1865, 3,042 males and 2,999 females died of pulmonary consumption, or 16.19 per cent. of all the deaths were from this cause. This mortality is 4 per cent. greater than that of Philadelphia for the last 11 years. In New York State, 1850, 3,257 males and 3,434 females died from this disease, and in 1860, 4,014 males and 4,185 females; for these 3 years the proportion of males to females was as 97 males to 100 females. In 1865, there were 96 males to every 100 females living of all ages in the population of the State.†

Dr. Snow says: "Of the decedents from consumption a large majority of those of American parentage have been females, but until 1868 there were usually more males than females among those of foreign parentage."

In the New England States, according to the census of 1870, of the decedents from consumption 84.58 were males to every 100 females, which is probably not much above the proportionate excess of females in the population.

* Registrar-Gen.'s Rept., 1854.

† Census of State, 1865, compiled by Dr. Franklin B. Hough.

Some authorities say that "consumption is more likely to be transmitted by a mother than a father." We may find a reason for this in the following:—

The egg from which a male is derived, being for a longer time under the sole influence of the mother (before impregnation), acquires more of her physical constitution and peculiarities, resembles her more, or inherits more of her physical defects and tendencies, and this egg is impregnated by a weaker element on the father's part, than his female issue;—while the egg from which a female is derived is a shorter time under the sole influence of the mother, being impregnated earlier in its course of development; and besides this it requires the highest power of the male element to communicate the impregnating influence to it. Hence we have less hereditary disease *exhibited* in the female, yet she may *transmit* it with greater facility than the male, though it may not have developed in her.*

An *increasing or high rate of mortality* is accompanied by greater fecundity, larger proportion of male births, and *greater mortality among males than females of all ages.* This rule holds in cities or parts of cities as compared with other cities, but may not hold when cities are compared with country districts. With very rare exceptions the males usually exceed the females in births, from 2 to 6 per cent.; yet in no country, were the influence of emigration and immigration excluded, are the number of males living equal to the number of females, particularly in old and highly "civilized" countries. Throughout the world there are millions more females than males; especially is this true among adults. As there are from 2 to 6 per cent. more males born than females, yet there are at least 6 per cent. more females in the living population,† and as the proportion is steadily increasing it is evident that females are longer-lived than males.

I have been contented to bring together these facts and arrange them with a view of showing the greater longevity of females in general, and in particular in regard to the effects of hereditary disease, which are the great source of loss to life-companies. It is scarcely necessary for me to draw the inferences from these facts and figures, for they are so plain that it is unnecessary; one can easily see, by examining the table, that a woman whose parents died of brain-disease, is a much better risk than her brother, so far as the likelihood of her dying of the same affection is concerned.

2003 WALNUT ST., PHILADELPHIA, May, 1873.

THE MEDICAL EXAMINERS.

TO THE EDITOR OF THE MEDICAL RECORD.

As one deeply interested in the subject of Life Insurance, and having a high opinion of the benefits conferred by the institution, when rightly managed, upon society, I most heartily welcome the effort you are making to increase the safety of the companies and the security of the insured by improving the medical examinations. There is great need of improvement in many respects. Yet, if you will allow me the liberty of saying so, the *tone* of the articles in your first number conveys the impression that the fault lies chiefly, if not entirely, with the medical profession. That the companies have not as yet done all they might do to secure faithful and reliable reports

* For a more full explanation of this theory, see the author's next paper on "The Laws of Transmission of Resemblance from Parents to their Children."

† The U. S. census of 1870 gives only 99.89 males to 100 females in the native-born population, while in the foreign-born population there were 117.01 males to every 100 females. The large excess of males in the latter case is due to the greater number of male immigrants as well as the larger proportion of male births among them than among the native-born parents.

as to the health and eligibility of candidates for insurance is to me perfectly plain, and the object of this communication is to very briefly present for their consideration two propositions, the adoption of which would, I believe, be very great improvements upon the present plan of doing business.

First: Let there be appointed a State or district supervisor of medical examiners. Let him be a medical man, acquainted with the profession generally, and let him appoint examiners from considerations of age, experience, character, etc. Such an officer would render valuable services to the company, and would deserve pay for his services. Under such administration, we should not see the examinership given to the first medical acquaintance made in the town by the agent, or to one who has just graduated, when there are many who have served in the capacity for years and made the subject a study. Further, and far more important, the examiner would then never be, as he never should be, the creature of the agent, or in any way dependent upon him.

Second: Whether the former plan be followed or not, let the blank for the medical examiner be invariably separate from the application, with directions to mail it direct to the home-office and not allow it to pass through the agent's hands, to be seen by him or by any one else. Generally, in small towns, and sometimes in large cities, the examiner finds it difficult to make an honest report upon an applicant without injuring himself. Frequently he is obliged to resort to some subterfuge to enable him to do his duty honestly by his employer, the company, and by his other employer and neighbor, the applicant. All this would be avoided by the plan suggested, were it followed by the companies generally, and made invariable as to individuals.

The value of these suggestions may not appear as great to others as to myself; I have learned it from an experience extending over many years as examiner for several companies, and I present them in your columns for the consideration of those interested. J. C. R.

DAYTON, OHIO.

TO THE EDITOR OF THE MEDICAL RECORD.

I AM in receipt of the Special Edition of the MEDICAL RECORD, May 15, 1873, with the notice that the ..... Life Insurance Co., of Hartford, Conn., has paid the subscription price and directed the RECORD to be sent to me for one year from May 15, 1873.

While I tender, through you, my sincere thanks to that company for so doing, I wish to take notice of the article written by the Secretary of a Life Insurance Company—on the relation of the Medical Examiner to the business of Life Insurance.

The writer of that article says, "It is undoubtedly the fact that by all life-underwriters the medical examination is considered the *weak spot* in conducting the business of life insurance," and as he proceeds we are led to feel that this weak spot comes less from a want of professional skill than from a want of honesty and *moral* qualifications in the medical examiner.

Now this is putting the matter in a strong light, and casting a reflection upon the medical profession which, I think, is not fully deserved. The author of the article evidently does not write through any feelings of malice, and probably not without reason for so doing, but I think he lays the cause to the wrong source, and makes the examiner bear the guilt which often belongs and should be laid to other causes.

Without going into an argument, I will state two facts which came to my notice and bear on this point. An agent for whom I had made several examinations presented one man who, to appearance, was a good subject, but knowing something of his history I declined to examine him, feeling sure I should not pass him, and supposed the matter stopped there; but, instead, the applicant was taken to a neighboring town, passed examination, and received into a company.

The other instance was an applicant whose examination was good, but the family history given by the applicant caused me to send him to the headquarters of the company; he was admitted. Some two or three years after that, this person made another application through an agent to this company, and his examination being good I recommended his insurance, knowing he had been admitted at headquarters on previous application. The company, however, rejected the application with considerable spirit, gave the agent a lecture, telling him that he must pay the examining fee.

I am glad you have added a department of Life Assurance to the RECORD, and think that good will come out of it.

Companies cannot be too particular in taking risks, nor physicians too thorough in examinations, but agents can be too persistent in getting applicants.

Yours truly,

JEROME WILMARTH, M.D.

UPTON, MASS., June 9, 1873.

THE RELATIONS OF THE LIFE-INSURANCE COMPANIES TO THE MEDICAL PROFESSION.

BY A MEDICAL DIRECTOR.

No one who is conversant with the business of life insurance will deny that the mutual relations between the companies on the one hand, and the medical profession on the other, are at the present time eminently unsatisfactory to both parties, and fraught with danger to the best interests of the community. The executive officers complain that "the medical examination of applicants does not afford that protection against the intrusion of unsound lives which it is designed to effect;" in other words, they consider the medical examination as "the *weak spot* in conducting the business of life insurance." This evil they attribute not so much to a lack of professional skill in the medical examiner as to the "absence, too frequently observable, of a certain *moral* qualification, not less essential in the exercise of his responsible duties." *

This is, in brief, the ground of complaint on the part of the companies; and, we regret to add, it rests on a foundation of fact.

On the other hand, the medical examiners complain that the companies do not treat them fairly; that they are quietly allowed to make room for some more lenient physician, the moment the exercise of their duty to the company conflicts with the interests of the agent. They say, furthermore, that their fees are too small in proportion to the responsibility which they are made to assume.

While both sides, then, seem to have just cause for complaint, the question still remains, Who is primarily to blame for this condition of things? Is it because there is a widespread and growing lack of moral responsibility among the members of the medical fraternity, or have the companies enlisted in their service

* See MEDICAL RECORD of May 15th, 1873; article, "On the Relation of the Medical Examiner to the business of Life Insurance." By the Secretary of a Life-Insurance Company.

a large percentage of the irresponsible men in our profession? Are physicians deteriorating as a class, or have the companies been negligent in their efforts to secure the coöperation of the best medical men in the towns where they insure lives? "Secretary," viewing the question from his stand-point, throws the blame upon the medical profession, or, rather, he dwells upon the fact that a very large percentage of the medical examiners fall short of their duty to the companies, and says nothing about the shortcomings of the companies themselves. His communication, which is made in the friendliest spirit, is an appeal to the medical profession to co-operate with the executive branch of the business in affording to the insured community that protection to their interests which they have a right to expect. It is in this spirit, and with this end in view, that we would offer the following criticism on the course pursued by the companies toward the medical profession.

It has been and still is the custom of a large proportion of the life-insurance companies, to entrust the appointment of medical examiners to the local agent. They instruct him to select the best physician he can find in the place and to forward his credentials to the home-office, where, if it is found that his references are good and that he is a graduate from a regular medical school, the appointment is confirmed. This pernicious method is the chief source, we believe, of the whole trouble, and we therefore beg leave to follow out its workings more in detail.

In the first place, is it likely that, even under favorable circumstances, the agent will select the most capable and trustworthy physician in the town? Does not the choice of a doctor in this case affect the pecuniary interest of the agent too deeply to render him a competent person to make the selection? So very many cases are on record of collusion between the examiner and the agent, that we are amazed that a majority of the companies should still tolerate a system under which such things are possible.

While most agents would undoubtedly scorn to recommend a bad risk to their companies, yet very many of them, as stated by a correspondent,* will "purposely avoid giving business to a man they know to be competent and independent, preferring a more *compliant* examiner." These men want an examiner who will not be over-particular, who will "let their candidates off easily"—in a word, who will help them in their business.

Another of the bad effects of this system may be seen in the frequent change of examiners in one and the same town. The agent, finding that he has not received from Dr. A. all the assistance he expected in the way of introductions to friends, or that he is a trifle too rigid in his examinations, writes to the home-office that it will be necessary for him hereafter to employ Dr. B., as Dr. A. has too large a practice to attend to the business of examining applicants. Dr. B.'s credentials are satisfactory to the company, and he becomes the new examiner. In the same way, Drs. C. and D. in turn are appointed. Dr. A. in course of time discovers that his place has quietly been filled by Dr. B., for what reason he is unable to discover. In all probability the same performance will be gone through with by the agent of another company, and then Dr. A., who is a straightforward man and possesses some self-respect, determines in the future to make no more examinations. Is it astonishing that the better class of physicians are disgusted with life insurance, and look with distrust upon companies that knowingly allow their business to be conducted on such loose principles? They see, better than any one else, how this branch of medicine, in many parts of the country, has gravitated into the hands of the incompetent, inexperienced and unscrupulous; and their conclusion is, that "the companies are indifferent about the matter," that they do not care to secure the services of the best men in the profession.

The real reason why the companies have perpetuated this method of appointing medical examiners lies, we believe, in the fact that they are *afraid* of losing their agents; they fear that the adoption of a system which would practically ignore the agent in the appointment of medical examiners, would cause him to revolt to the service of another and more pliable company.

The medical profession, like all the other professions, has its share of unworthy members, and we believe that the evil of which "Secretary" complains is in great measure due to the fact that the companies have widely enlisted these unworthy professional men in their employ. We certainly prefer to believe this rather than to assume that the standard of professional morality and skill is being lowered.

The second ground of complaint on the part of the medical examiners relates to the question of fees.

We recognize the difficulty of offering any satisfactory solution to this knotty question, and shall be glad to receive additional light upon it from any quarter. The following remarks, however, are offered as bearing upon the subject.

The general demand is that the companies should pay a uniform fee of five dollars for every examination, and in some sections of the country the county medical societies have passed a vote making it an offence for any of their members to examine for less than that sum. This surely is not the right way to accomplish the object in view, and, besides, it is likely in certain instances to prove oppressive to younger but competent and trustworthy members of the profession, who would be glad to examine for a smaller fee. Another effect of such a resolution is to place the services of inferior men at the same value with those whose opinion, in a moneyed point of view, is really worth the fee demanded.

There is still another aspect to the question. If the examiners in the country and in the smaller towns and cities receive five dollars for an examination, the examiners in the larger cities—New York, Boston, and Philadelphia—would then have a right to demand at least eight or nine dollars for similar services, as the purchasing value of a dollar in the country is nearly equal to that of two in the three larger cities. With perhaps one or two exceptions, the companies could not afford to pay such fees, without at the same time charging higher rates for insurance.

On the other hand, if the companies could secure the services of competent and trustworthy physicians, who at the same time would take a reasonable degree of interest in the prosperity of their employers—the company—and would feel how serious is their responsibility to the insured community, it would be found a positive economy to pay five dollars, or even more, for every examination. At present, however, the companies feel that they are not receiving a fair equivalent for their outlay, and are consequently not disposed to raise the fees.

The last point to be considered—and it undoubtedly is the most important of all—is, how may satisfactory relations be restored between the medical examiners and the companies, and how may the latter secure the valuable protection to their interests—and their inter-

* See MEDICAL RECORD of June 15, 1873. Letter from a "Medical Examiner."

ests are the interests of the community — which the medical profession alone can give.

In answer to this question we would say, in the first place: Leave the appointment of medical examiners to physicians of the highest character and standing in their respective States or sections of country. They can have no possible motive for appointing any but competent and trustworthy men, and their facilities for ascertaining the real character and professional ability of the physicians in their vicinity are unquestionably greater than those possessed by any non-professional person. Let the examiner so appointed understand that his position is a permanent one; that, if he performs his duties faithfully, the agent will be powerless to remove him. According to this method the positions will seek the men, because of their fitness, and not the reverse, as has hitherto been the case to a very great extent. This course, too, will tend to win back the respect of the medical profession for the business management of the life-companies, and open the way for a closer union between the great body of examiners and the home-offices. A few of the companies have already tested this mode of appointing medical examiners, and have found it a decided improvement over the old system.

In the next place, there should be but one examiner in every town. If in certain places it is thought desirable to have a second or substitute examiner, the agent should be instructed that he is not to employ the two indifferently, but to use all possible efforts to have the applicant examined by the official representative of the company.

A correspondent lays stress on the importance of having the medical examiner's report kept separate from the application, the physician being instructed to send it direct to the home-office. He believes that by this means the examiner will be able to conceal the results of the examination from everybody except the company, and so avoid injuring his interests in the town where he practises. It is difficult to see what material advantage this plan would have over the one now generally followed, for the applicant would very soon hear of his rejection, and would of course know upon whom to throw the blame. It appears to us that there are but two ways of managing this difficulty, namely, either to face the responsibility boldly and conscientiously, or to refuse to assume the duties of an examiner.

Finally, the home-offices should do everything in their power to interest the examiners in the work of excluding all who are not justly entitled to the benefits of life-insurance. So far as is possible, these physicians should be induced to take a personal pride in the mortuary report of the company which they represent. Exactly how this should be done is a difficult question to answer. At least two companies, to our certain knowledge, have for more than two years spared no pains to cultivate friendly relations between the examiners and the home-office. The medical directors of these companies have availed themselves of every opportunity for becoming personally acquainted with the examiners. Efforts like these must go far toward solving the question of how to enlist the profession more earnestly in behalf of the life-companies.

ASSOCIATION OF LIFE-INSURANCE EXAMINERS FOR BOSTON AND VICINITY.

We give below the full text of the circular note issued by the "Association of Life-Insurance Examiners for Boston and Vicinity," to the Presidents and Directors of the companies doing business in that city.

We are glad to welcome any movement looking to a more uniform action on the part of the medical examiners for life-insurance companies. At present every company has its own peculiar notions and ways of conducting the medical part of their business. If the examiners of these companies would meet from time to time, as proposed by the Boston Association, and compare views on some of the important subjects which constantly come before them, good would undoubtedly result from their deliberations. We can see no reason, for instance, why the question of family history should not be estimated at a more uniform value in all the offices. If every medical director would carefully investigate the experience of his own company in this particular, and then, armed with these facts, meet his brother physicians of the Association for the purpose of discussing the question and comparing experiences, it is not improbable that a decision would be reached which would from that time forth govern all the companies. At present, the widest difference prevails among the different offices in regard to this particular question. It is a source, too, of great annoyance to the agents, who are constantly writing:—"How is it that your doctor rejects this application, while such and such a company's physician considers the man a first-class risk?"

The question of family history is not the only one; rheumatism, gout, fistula, spitting of blood, amputations, etc., might all be assigned a more uniform value by the intelligent discussions of an organization like that of the Boston examiners.

At first sight, it appears rather anomalous that a body of medical examiners should recommend to their respective companies "the acceptance of a moderate number of unexceptionable, rather than of a large number of doubtful risks," and yet the present tendency of many of the companies fully justifies these physicians in thus urging greater caution in the selection of lives.

The plan of notifying rejections would undoubtedly give greater security to the business of all the companies. It would also stimulate the examiner who first sees the applicant to use great caution, for fear that, at a subsequent examination by another physician the risk might be declined on just grounds. We are told, however, that there are legal objections to such a plan, and that the companies are not willing to officially sanction it. As the proposition was made purely for the good of the companies themselves, the withholding of their sanction must necessarily result in the abandonment of the plan, as of course the examiners would not assume the responsibility.

The request that there should be a uniform fee of five dollars for every examination in Boston and vicinity appears to us reasonable and just, and we trust it will meet with a favorable response from the companies that still continue to pay a smaller fee.

The subjoined is a copy of the circular recently issued by the Association:—

To the Presidents and Directors of Life Insurance Companies doing business in Boston and vicinity.

GENTLEMEN.—The undersigned, Medical Examiners of many of the Life Insurance Companies having home or branch offices in Boston, respectfully represent that they have recently united themselves into an organization, to be known as the "Association of Life Insurance Examiners for Boston and Vicinity."

The special objects contemplated in this movement embrace not only a full understanding of the duties and responsibilities of Medical Examiners, and in a

general way an assurance of mutual support and co-operation in the performance of those duties, but also the consideration of subjects important to the companies we individually represent, and to whose interests we feel ourselves pledged. We trust that the views which we express in this letter will meet with your approval, and that you will be induced to give us your co-operation.

We believe the examination of applicants for insurance to be a subject of the utmost importance; that the due performance of his duties in making such examinations should call forth the highest ability and the most conscientious action on the part of the Examiner; and that upon such performance of duty by the corps of Examiners depends the very life of a company. We are confident we subserve the best interests of the companies we represent in recommending a judicious selection of risks,—the acceptance of a moderate number of unexceptionable rather than of a large number of doubtful risks. To this end we ask that the companies will aid us by appointing none but men standing honorably in the profession, of undoubted ability and unimpeachable integrity.

From our knowledge of the fact that in some cases applications are presented to the home-offices by persons other than the general agents, and that examinations for such risks are occasionally made by irresponsible physicians, we beg respectfully to suggest that *all* applications made in Boston and vicinity be presented for approval to the Examiners at the general agencies; it being understood that all examinations, and all business relating to the medical department, shall be transacted through the regular Examiners of the companies, unless for manifest reasons to the contrary.

We request that the sanction of the companies be given to an arrangement by which Medical Examiners shall communicate to the members of the Association the names and causes of disability of rejected applicants. We ask this privilege in order that cases presenting obscure or latent symptoms may be brought clearly to the notice of the Examiners. It is well known to us that unscrupulous canvassers frequently attempt to pass applicants in one company, who have been, either virtually or actually, rejected in another, without stating such fact, and even denying it. Such persons apparently do not consider an applicant rejected until his papers have been passed upon by the home-office. It will readily be seen that a plan of notifying rejections, while it would not injure the company which has declined an applicant, will act reciprocally in his favor.

Several of the companies represented in Boston pay their Examiners salaries, or a uniform fee of five dollars for each examination. We respectfully request companies who do not follow either of these plans to take into consideration more ample remuneration of their Examiners for the time spent in the discharge of their duties. Many of the Examiners named below are expected to visit the offices of their companies at stated hours daily, and pass a certain portion of time there. The time thus devoted is usually the most important in the day to a physician; it often requires him to pass over a considerable distance from his home; it obliges him to give many hours at the office without any compensation whatever; and acts as a serious detriment to the transaction of his private business. In view of these considerations, we respectfully urge upon you either the payment of an annual salary, sufficient to compensate the medical officer for the time spent, or, where business does not warrant it, the uniform payment of five dollars for each examination made.

It is the hope of the undersigned that the suggestions thus made will meet with your approval. Without doubt other suggestions may present themselves, which will be of advantage to the companies, and we shall take the liberty of offering them to your notice from time to time.

Respectfully submitted by the undersigned, Medical Examiners of the companies named.

N. B. Shurtleff, M.D., *Manhattan and World.*
Wm. W. Morland, M.D., *New England Mutual.*
A. B. Hall, M.D., *North-Western.*
H. K. Oliver, M.D., *Connecticut Mutual.*
Francis H. Brown, M.D., *Washington.*
Hall Curtis, M.D., *Ætna.*
J. W. Cushing, M.D., *American Popular.*
W. H. Campbell, M.D., *Massachusetts.*
C. B. Porter, M.D., *Travellers'.*
Henry Tuck, M.D., *Mutual Life and United States.*
E. J. Forster, M.D., *John Hancock.*
Thomas Crozier, M.D., *Brooklyn and State.*
D. H. Storer, M.D., *Mutual Benefit.*
Horace Dupee, M.D., *Home.*
F. E. Oliver, M.D., *Charter Oak.*
F. S. Ainsworth, M.D., *Equitable.*
G. F. Bigelow, M.D., *Knickerbocker.*
R. L. Hodgdon, M.D., *John Hancock and Arlington.*
George Fabyan, M.D., *Asbury.*
J. C. White, M.D., *John Hancock.*
G. J. Arnold, M.D.
P. A. O'Connell, M.D., *Penn.*
F. E. Bundy, M.D., *New Jersey Mutual.*
C. W. Swan, M.D., *New York Life.*
G. G. Tarbell, M.D., *Globe.*
F. I. Knight, M.D., *National of the U.S.A.*
A. M. Sumner, M.D., *Equitable.*
Thomas Waterman, M.D., *Unity.*

MISCELLANEOUS.

EXAMINATION OF APPLICANTS BY PHYSICIANS WHO DO NOT RESIDE IN THE SAME TOWN WITH THEM.

We have known of a few instances where an agent has succeeded in foisting an undesirable risk upon the company by having the applicant examined in a neighboring town, where little or nothing was known about his habits. To prevent this, as far as possible, the following order has recently been issued by one of the life-companies of this city:—

To our Agents: You are hereby notified that in the future we shall not accept the medical report of an examiner who does not reside in the same town with the applicant, or who has not been designated as the regular examiner for that town.

The knowledge possessed by a physician regarding the personal habits and general health of the individuals in his own town and vicinity is of great value to us. It is for this reason that we shall insist upon a strict adherence to the rule.

We are gratified to see by our exchanges, that Dr. Hough's able article on "Longevity and other Biostatic Peculiarities of the Jewish Race," (published in our number of May 15) has received from the Jewish newspapers the favorable criticism which it deserves. The "Hebrew Leader" republishes it entire in four consecutive numbers. We also notice its republication in the "Cincinnati Lancet and Observer."

TEMPERANCE AND INTEMPERANCE IN LIFE INSURANCE.

An English Life-Company, that issues life-policies to those who restrict themselves to the use of beverages not more ardent than tea or coffee, has published the re-

sult of its experience during the last year. We are not aware of a life-company in this country that has such a high opinion of severe temperance in drinks as to offer a premium for its practice; but perhaps the result of the experiment, as referred to in the following article extracted from the London *Commercial World*, may direct the attention of our companies to the subject:

"The Temperance and General Provident Institution has attained some distinction in one particular—it has added in a single year £125,528 to its assurance fund. The experience of the two sections, as brought out in the directors' report recently issued, shows very similar results to those which have appeared in former years, namely, that in the Temperance section, where the assurants practise abstinence from alcoholic liquors, the mortality is considerably below the expectancy, while in the General section it is above the expectancy.

"In the absence of precise information we are left to conjecture, to adopt a medical phrase, the predisposing and active causes of this divergence. That there are specific causes in operation, adequate to produce these different results, can admit of no question. What we require to discover is what those causes really are, and in what degree their philosophy—using the word in the sense of the reason of things—can be traced with anything like certainty. A mind of the right sort, dealing with the data open to the knowledge of the officials of the office, could, no doubt, construct a reliable theory of the causes actually at work. But hitherto, neither by Mr. Brown, the actuary, nor by any other person, so far as we are aware, has any such attempt been made. Year after year we have the same bare-bone facts submitted. In the present report we find it stated:—

"'The actuary, Mr. Samuel Brown, reports the mortality of whole-life policies to have been as follows, viz., expected claims in the Temperance section, 137 for £27,058; actual claims, 90 for £13,005. In the General section, 241 claims for £48,883 were expected; the actual have been 282 for £50,575.'

"It is observable that the business of the General section of the office is very much larger than the business of the Temperance section. That fact, however, standing alone, supplies no adequate clue to the discovery of the real reasons for the wide divergence in the mortality of the two sections. We want to have an actuarial and philosophical answer to the query, 'What are the probable reasons of this palpable difference in the mortality of two sections of the business?' We should like to know if, in a comparison of equal numbers, the ages of the assurants in both sections are the same, and, also, if the occupations are the same, or similar, and, if not, in what respects they differ. Are the differences favorable to the Temperance section, or against it?

"We submit these points to Mr. Brown, and invite him, as a matter in which the community is deeply interested, to give us the best answer which his science and philosophy can supply.'—*Ins. & Real Est. Jour.*

MORTALITY OF INSURED FEMALE LIVES.

An actuary of this city informs us that, according to all the tables not based upon the experience of life-insurance companies, female lives are unquestionably the best, except perhaps in the ages over 65; but that in the best-ascertained and most voluminous table, based upon the risks taken by companies, the female risks between the ages of 15 and 49 are the worst. (See H^m and H^f, New Actuaries, 1869, page 26, based on 16,604 female lives.) The following is the table referred to:—

H^m and H^f—Mortality per cent. of Male and Female Lives compared.

Ages.	Male. (1)	Female. (2)	Difference.
15 to 19	.47	.86	— .39
20 to 24	.69	.85	— .16
25 to 29	.69	1.18	— .49
30 to 34	.82	1.13	— .31
35 to 39	.95	1.21	— .26
40 to 44	1.07	1.28	— .21
45 to 49	1.36	1.39	— .03
50 to 54	1.74	1.57	+ .17
55 to 59	2.40	2.02	+ .38
60 to 64	3.48	2.86	+ .62
65 to 69	5.02	4.37	+ .65
70 to 74	7.33	6.84	+ .49
75 to 79	11.00	10.66	+ .34
80 to 84	16.52	12.51	+ 4.01
85 to 89	22.35	22.82	— .47
90 to 94	32.73	22.68	+10.05
95 to 99	54.55	33.33	+21.22

It will be noticed in this table that the excess of deaths among the female lives occurs between puberty and the menopause, and that it reaches its highest point between the ages of 25 and 30. This circumstance would suggest the idea that this higher mortality during this particular period of life is probably attributable to parturition, or to diseases of the female organs of generation. We have never seen a tabulated statement showing the actual experience of our companies in this particular, and so cannot say whether the facts corroborate this idea or point to other diseases as the cause.

IMPORTANCE OF VACCINATION.

Dr. Robert Grieve, in a paper recently read before the Epidemological Society of London, thus sums up the results derived from an experience of 6221 small-pox patients admitted to the Hampstead Hospital:—

"Of 6,221 patients admitted, 1,248 were without marks of vaccination, and of these 638, or 51.12 per cent., died; whilst among the 4,973 who showed proofs of being vaccinated, in only 567 instances did the disease prove fatal, giving a percentage of mortality of 11.40. From these numbers it is seen that, although the number of patients received into the hospital of the vaccinated class exceeded the number in the unvaccinated—a fact of which the anti-vaccination league has made vigorous use—the larger number of deaths occurred amongst the unvaccinated.

"In the 3,555 cases in which the number of marks was noted, it is found that the percentage of mortality in those showing one mark is 17.39, showing two 12.17, showing three 10.58, showing four 8.38, showing five and more 6.43—a scale in which the mortality is in inverse ratio to the number of marks seen. The practical deduction to be made from these numbers is, that the larger the number of places in which we vaccinate, the more protection is given. To obtain even a fair average of protection, at least three marks are required, but something is gained by exceeding that number."

In the blank-forms of most of the insurance companies the question of vaccination reads thus: "Have you ever been vaccinated?" In a few instances it reads:—"Have you been successfully vaccinated, and when last?"

The ideal insurance company of the future will probably have the question printed in these words: "How many vaccination marks have you on your body?"

Original Communications.

ACUTE URÆMIA.

By ALFRED L. LOOMIS, M.D.,

PROFESSOR OF INSTITUTES AND PRACTICE OF MEDICINE, MED. DEPT. UNIVERSITY OF THE CITY OF NEW YORK.

(Read before the New York Academy of Medicine.)

MR. PRESIDENT, at your request, and in compliance with your suggestion, I will, this evening, make a few remarks on the history and treatment of *Acute Uræmia*.

Under this term may be grouped two classes of symptoms, which differ in their mode of development and in their attendant phenomena.

In the one, nausea, vomiting, and headache usher in twitchings and epileptiform convulsions of the voluntary muscles, a state which has received the name of uræmic convulsions.

In the other, headache and drowsiness, or convulsions usher in a state of insensibility, which has received the name of uræmic coma.

The primary cause of both these conditions is always to be found in a failure of the kidneys to perform their normal function of elimination, and the consequent accumulation in the circulation of some or all of the poisonous elements of the urine. This condition may occur in the course of any disease in which suppression of the renal secretion takes place. Such arrest of the function of the kidneys most frequently occurs in scarlatina, in the different forms and stages of Bright's disease, in the puerperal state, and in connection with the surgery of the urethra.

Whatever the poisonous agent may be, it unquestionably acts directly upon the cerebro-spinal centres. In its action, it does not seem so much to directly excite convulsions or coma, as to increase the irritability of the nervous system, and the consequent liability to convulsions from causes which, under other circumstances, would produce no noticeable disturbance.

A number of theories have been advanced in regard to the exact element which acts as the poisonous agent.

The earliest accepted view is that which attributes the symptoms of uræmia to retained urea. This view, originally proposed by Willis, has been ably sustained by the experiments of Drs. Richardson and Hammond; and although at different times it has been discarded and apparently disproved by the experiments of distinguished observers, to-day it is the accepted view of most authorities.

Some years since, Frerichs made the statement that urea as urea is innocuous, and advanced the theory that the poisonous agent was carbonate of ammonia resulting from the decomposition in the blood of urea into carbonate of ammonia and water, which decomposition he ascribed to the action of a ferment in the blood. This theory has been entirely overthrown by other experimenters.

Still more recently, Traube has advanced a hypothesis which has attracted much attention (Stewart). "He points out that, as in Bright's disease, the blood serum being in an impoverished state, tends to transude, and in consequence of hypertrophy of the heart, the blood-pressure in the arterial system is increased; so when from any cause this blood-pressure is suddenly increased, or the density of the blood-serum is further diminished, serous fluid transudes through the small arteries, and œdema of the brain results. The result of this is, that the capillaries and veins are compressed, and the brain becomes correspondingly anæmic. The form of the uræmic attack varies according to the part of the brain which is so affected. If the cerebrum alone is involved, coma appears; if the pons varolii and medulla oblongata alone, convulsions; if both together be affected, the result is combination of coma with convulsions. This hypothesis is certainly well worthy of being carefully investigated, for the condition of the brain met with in fatal cases of uræmia often accords with it, at least in the chronic cases in which death occurs from uræmia. But I have some difficulty in accepting it as explaining uræmia in acute cases. It is to be remembered that its author does not claim for it any position higher than a mere hypothesis."

The experiments of Oppler and others go to show that urea is formed by the kidneys from the nitrogenous materials in the blood, and that the uræmic manifestation depends mainly upon the accumulation in the blood of creatin and creatinin. Oppler also found that there is a retention of muscle-waste in cases of uræmia, and conceived that there may be a similar retention of the products of nerve-waste; and to the deleterious influence of this substance he would ascribe the symptoms.

Dr. Grainger Stewart makes the statement that some forms of uræmia *may* be associated with structural changes in the brain, similar to those which occur in the retina in cases of neuro-retinitis.

The experiments and facts upon which these different theories are based lead to the following conclusions:—

1st. That uræmic toxæmia, acute and chronic, depends on a complete or partial arrest of the urinary secretion.

2d. A qualitative analysis of the constituents of the urine goes to show that urea is its only positive poisonous ingredient, and "that *it* is not the special product of any one particular tissue or organ, but the united product of all nitrogenized effete matter."

3d. Numerous experiments show that urea, when introduced into the blood of animals, acts as a narcotic poison, producing phenomena identical with those of uræmia.

4th. That urea is not decomposed into carbonate of ammonia and water in the blood, but that such decomposition may take place outside the blood-vessels in the bladder, pelvis of the kidney, and intestines; and if the products of the decomposition are retained in these cavities any length of time, they give rise to a condition of ammonæmia, which in many of its features resembles uræmia.

While, therefore, the question as to the exact poisonous agent in uræmia is still unsettled, it seems to me that the facts relative to urea warrant the assumption that urea is an irritant poison, and when in excess in the circulation acts primarily upon the cerebro-spinal centres, and through them interferes more or less with the functions of organic life,—and that œdema of the brain and other structural changes which occur in the course of uræmia are the results of the action of this poison.

An acute uræmic attack is usually preceded by certain premonitory signs, such as œdema in various parts of the body, restlessness, or an almost irresistible desire to sleep, vertigo, headache, delirium, nausea, vomiting, and impaired vision; the countenance has a pale, waxy or dingy appearance; the urine is scanty, high colored, bloody, albuminous, and contains casts. After the appearance of the premonitory symptoms the progress of the mischief will vary in different cases

according to the amount and cause of the retention of the urea.

Thus, if a large amount of urea is suddenly thrown into the circulation and retained by a continuance of the arrested elimination, or increased by a continuance of the producing cause, the body and extremities become violently convulsed, or the patient passes rapidly into a state of coma.

The convulsion may consist of a single paroxysm, or a succession of paroxysms may follow one another at intervals of a few minutes or several hours, the patient lying during the interval in a state of more or less profound insensibility. During the convulsion, the face becomes livid, eyes glassy, the pupils contracted or dilated. At the commencement of the convulsive attack they are generally contracted; frothy mucus, which is sometimes bloody, collects around the mouth, and there is a strong urinous odor emanating from the perspiration. The pulse is accelerated, and the temperature is raised in some instances as high as 107°.

Uræmic coma may come on gradually, twenty-four or forty-eight hours elapsing before the stupor is complete, or the patient may fall suddenly into a state of profound coma, its advent resembling an attack of cerebral apoplexy. There are periods when the coma is so profound that nothing arouses the patient; at other times he is easily aroused, or arouses himself, and attempts to speak and to sit up, swallowing fluids with little difficulty.

When urea is gradually introduced into the circulation, or is freely eliminated, as in cases where renal disease is slowly developed, the system becomes accustomed to the presence of the poison, and thus a considerable excess of urea may exist in the blood for a long period without giving rise to any but the premonitory symptoms of acute uræmia; but when once the balance is destroyed and a certain excess of urea in the blood is reached, the kidneys become embarrassed by the excessive demand made upon their excreting power, and rapid and intense renal congestion follows, the nerve-centres are overwhelmed and either convulsions and coma, or both, follow, and thus acute uræmia may be developed in the chronic as well as in the acute stage of renal disease.

Uræmic coma is always accompanied by a certain amount of stertor; the respirations are accelerated at first, but they soon become slow and labored. The pupils are dilated, but they are not irregular; the pulse is more rapid than natural and lacks firmness. The temperature at first is raised, but after a time falls below the normal standard. Acute uræmia simulates in some particulars so many diseases in which convulsions and coma are the leading symptoms, that it is difficult to give directions which shall enable one to always separate it from analogous disorders. I will name a few of the more prominent points in its differential diagnosis.

The phenomena of an epileptic seizure are almost identical with those of uræmia, and in some instances the task of distinguishing the one from the other would be exceedingly difficult unless the previous history was admitted.

If the patient's history is known, the chronic character of the epilepsy is sufficient to distinguish it from acute uræmia, and an examination of the urine positively determines the uræmic character of a convulsion. At the time of the paroxysm a distinction may also be drawn, for in epilepsy one side is convulsed more violently than the other, while in uræmia both sides of the body are equally affected by the convulsive movements. In epilepsy, although there is loss of consciousness, reflex sensibility continues from the beginning to the end of the paroxysm, which is not the case in uræmia. Immediately following uræmic paroxysms there is deep coma; following an epileptic seizure there is merely a deep sleep, from which the patient may be aroused.

In cerebral apoplexy, coma always precedes convulsions, and with the convulsions there is facial paralysis and hemiplegia; there is also clonic spasm of the paralyzed parts, and the urinary symptoms of uræmia are absent. In hysterical convulsions the patient falls into a convulsive, tetanic or cataleptic condition, with a scream. Close inspection shows that the patient is not unconscious, and the pupils are normal, as are also the pulse and temperature. The limbs are jerked irregularly,—the breathing is jerking and spasmodic, and is attended with a choking sensation. There is no lividity of the face or distention of the cervical blood-vessels, and the close of the paroxysm is usually accompanied by the discharge of a large quantity of pale urine.

Cholemic convulsions, or those that occur when the blood is overcharged with the constituents of the bile, in their phenomena very closely resemble uræmia, but may be distinguished from them by the jaundice which precedes or accompanies their development, and by the antecedent history of acute hepatic affections. Convulsions originating in meningitis and other cerebral affections are distinguished by the accompanying characteristic symptoms of these affections.

The main points in the differential diagnosis of uræmic coma are identical with those of uræmic convulsions. It may be distinguished from the coma of apoplexy by the absence of paralysis, from opium-poisoning by the rise in temperature (the temperature in uræmic coma being generally above 100°, while in the coma from opium it is below the normal). The slow and peculiar character of the respiration in opium-coma also distinguishes it from uræmia.

The condition of the pupils is not a safe guide, for not unfrequently in uræmia they are as contracted as in opium-poisoning.

It is distinguished from epileptic coma by the antecedent history, and from rum-coma by the alcoholic surroundings of alcoholismus.

In all cases of coma, an examination of the urine is necessary to complete the diagnosis.

Causes of Death in Acute Uræmia.—Apparently the primary cause of death in uræmia is the accumulation of urea in the circulation, which acts as a true narcotic poison, resembling in its *modus operandi* other narcotics, of which belladonna and opium are the best types. When introduced in so small quantities that its elimination can be accomplished in a short time, it produces a moderate sleep; but when the quantity is sufficiently large to overtax the eliminating powers, it causes death by arresting oxidization.

Dr. Watson remarks, that whatever may be the nature of the unknown and perhaps fugitive condition of the nervous centres in uræmia, which is capable of arresting or abolishing their function, it is important to keep in mind a distinct and clear conception of the fact that there must be some such physical condition.

Dr. Richardson claims that there is first a direct toxical effect of the urea, acting by depression on the muscular and nervous system, and that in acute uræmia, as a result, the blood undergoes physical modifications which render it incapable of supporting the changes which constitute natural life. These modified states of the blood, consisting of increase of water, diminution of red corpuscles, modifications in the physical construction of the remaining cells, and accu-

mulation in the mass of blood of a true toxic agent, tend to render that fluid incapable of undergoing normal chemical reconstruction in the pulmonic current. Such blood is incapable of combining with the oxygen of the air; the arterial blood consequently loses its active colorific life-sustaining properties, and the final result is secured by what may be most properly designated apnœa commencing in the circulation.

Dr. Moreland states that acute uræmia, marked by the occurrence of convulsions and coma, leaves the brain anæmic in appearance and probably somewhat softened.

From the many facts, experiments, and statements made by competent observers, as well as by the clinical history of uræmia, it is evident that the primary cause of death is a narcotic poison, the exact nature and action of which we do not understand; that the primary action of this poison is on the nerve-centres, producing certain changes in the blood, which interfere with or arrest oxygenation; and this is followed by certain structural changes taking place in the different tissues of the body, which make up the post-mortem history of the disease.

I have now come to the special object of this paper, viz.: to the consideration of the treatment of acute uræmia.

I shall first give a brief synopsis of the most prominent views of the present day—the views of standard authorities. All agree in this, that in the treatment of acute uræmia, to secure as rapidly as possible a free eliminative action either by the skin or bowels, or by both, or by the kidneys, is of the first importance.

Frierich is the only authority that proposes to neutralize the uræmic poison, which, he claims, is ammonia. To accomplish this he directs the inhalation of chlorine gas, or the internal administration of the vegetable acids.

With most authorities the favorite method is diaphoresis, accomplished by vapor or hot air. It is claimed that by a vicarious action of the skin, the excrementitious products which normally fall to the lot of the kidneys to excrete are removed from the system in the cutaneous perspiration.

In connection with the process of elimination, a vicarious action of the bowels is induced by the internal administration of drastic purgatives: elaterium and scammony are the favorites to accomplish this hydragogue catharsis; and it is also claimed that by this method the alimentary canal eliminates the products which should normally find their way out of the body by the urine.

The testimony of authors on the utility of diuretics in the treatment of acute uræmia is conflicting.

Dr. Roberts says that his experience has not given him a high opinion of their efficacy.

Dr. Harley says that it ought never to be forgotten, that in acute Bright's disease, as well as in the first stage of all inflammatory and congestive attacks occurring in the course of chronic kidney affections, diuretics are inadmissible; and he adds, that the reason why the employment of diuretics often does harm in acute kidney affections is readily understood when we recollect that they have always the tendency rather to increase than diminish the flow of blood to the already inflamed organs.

Dr. Geo. M. Johnston states that with our present knowledge of renal pathology, it is clear that the practice of giving diuretics in acute nephritis is most unjustifiable.

Dr. Richardson says that one of the greatest errors common to the inexperienced is to give diuretics to a badly-working kidney,—an error as unphilosophical as it is unpardonable, for the cessation of the secreting function of the kidney indicates a tendency to congestion of the renal organs. To relieve renal congestion, not the kidneys, but some other emunctory channels, must be freely opened, and the kidneys left to do as little labor as possible.

On the other hand, *Niemeyer* maintains that, whatever theoretical objection against the employment of diuretics there may be, in desperate cases recourse should always be had to them.

Dr. Stewart recommends diuretics in the acute stage of the inflammatory form of Bright's disease to remove the effete material from the uriniferous tubes.

The ground on which diuretics are objected to is, that it is contrary to the principles of medicine to stimulate an inflamed part,—that the first step towards the healing of an inflamed organ is rest.

Admitting that this view is sound, we have a class of diuretics that do not in any sense act as stimulants to the kidney. Digitalis ranks first in this list; although a very efficient diuretic, it never seems to irritate the kidneys. The *modus operandi* of this remedy is now well settled (Stewart). By increasing the power of the heart's action, and perhaps, also, contracting the capillaries, it materially increases the blood-pressure. As the normal secretion of urine depends upon that pressure being in the healthy state unopposed by any obstruction, and the diminished flow in this disease is due to obstruction within the tubules, the digitalis appears to supply such an increase of pressure as overcomes the obstruction, and, indeed, carries it away by the force of the current it originates.

Accepting this view of the diuretic action of digitalis, its administration is especially indicated in acute uræmia. To obtain its effects in the condition of the kidneys that attends acute uræmia, I am convinced that much larger doses are required than usually are administered. My rule of practice in these cases is to give ½ an ounce of the infusion of the English leaves every three hours for twenty-four hours—or at least until I produce the specific effect of the drug—and I do not remember in a single instance to have met with the overwhelming accumulative effects of digitalis of which so many writers warn us.

The experience of every one, I think, will sustain me in the statement that when acute uræmia is fully developed, and the patient is in convulsions or coma, that often (in the majority of cases) the skin and the bowels, as well as the kidneys, lose their excretory action, diaphoresis cannot be induced, or if induced is not eliminative, and the bowels do not respond to purgatives, although the patient may swallow them in large doses.

Under these circumstances, Dr. Richardson says that he is "convinced that in cases of acute uræmia there is one, and only one, remedy to be adopted; that remedy is none other than the free abstraction of blood."

On physiological grounds venesection, in extreme examples of uræmia, comes forward as a natural and effective remedy; for, as there is a soluble poison in the blood, we secure in blood-letting the readiest means by which to remove the poison directly. He adds, there is yet another advantage in blood-letting; by it we relieve congestion of the visceral organs, and specially of the kidneys,—hence it usually obtains that after a removal of blood, secretion takes place readily, and a response is offered to diaphoretic and purgative remedies which did not before present itself.

Dr. Harley (in his recent work on the urine and its

derangements) makes the statement that in some cases of acute uræmia, especially in uræmic eclampsia, venesection may sometimes be had recourse to with great advantage, but its indiscriminate use he regards as highly unphilosophical with our present knowledge of uræmic convulsions.

Dr. Bamn, in his monograph on uræmic eclampsia, states that since the days of Dewées, Burns, and Hamilton, it has been and still is the custom to find the only power against uræmic eclampsia in abundant general blood-letting often repeated—a proceeding which he believes can be justified as little by the present state of our theoretical knowledge in regard to this disease, as it is by the mortality which follows its employment.

By bleeding the hydræmia is increased, as well as the danger of puerperal thrombosis and pyæmia, and not unfrequently the paroxysms are aggravated. A very strong argument against venesection in acute uræmia is the fact that, after extensive trial by the profession, the practice has fallen into disuse.

The question then comes to us, if overwhelming the system by the uræmic poison (marked by convulsions and coma) shuts off for a time all avenues of elimination, what means have we to counteract the effects of this poison and open again the avenues of its elimination, or, at least, to hold the patient until the normal eliminating process shall be re-established?

Our first efforts must be directed to diminish reflex sensibility, and subdue spasmodic muscular paroxysms, for these, if continued, either will directly terminate life or end in an equally fatal insensibility.

The remedy which for some years has been employed for the accomplishment of this object is chloroform. It has been extensively used, and is, I believe, regarded as the readiest and safest means for controlling uræmic convulsions.

Dr. Bamn says, in regard to it, that chloroform narcotism should be induced instantly when indications of an impending paroxysm show themselves, but that the administration of chloroform must not be kept up during the convulsive attack or the state of coma.

Dr. Roberts says that during the convulsive paroxysm chloroform inhalation is the most prompt and ready means of controlling the spasm; when, however, uræmic paroxysms begin with drowsiness and gradually pass on to insensibility, or when convulsions occur as breaks in a continuously comatose condition, chloroform affords no prospect of relief.

Dr. Harley, although he recommends some form of anæsthetic in uræmic eclampsia, makes the statement that if medical men were more intimately acquainted with the powerful chemical changes which chloroform exerts on the constituents of the blood, even when taken into the system by the lungs, they would probably employ it with more reserve than at present they do.

Sir James Simpson says that although the direct action of chloroform upon uræmia is doubtful, yet it is certain that in eclampsia chloroform is the best palliative, inasmuch as it moderates the paroxysms.

Although many authorities recommend the use of chloroform in uræmic eclampsia, few make mention of its employment in acute uræmia independent of the puerperal state. Its only known clinical effect is to control muscular spasm, and in a large proportion of cases it fails to give more than temporary relief to those patients who pass from one convulsion to another into a state of complete coma, and die without any apparent neutralizing or eliminating effect from the chloroform.

In the few cases in which I have administered chloroform in non-puerperal uræmic convulsions, it has seemed to me to have no other effect than to arrest convulsive movements by rapidly hastening my patient into a state of insensibility. In no instance have I known its administration to be immediately followed by diaphoresis, or a return of the urinary secretion; and it has seemed to me to be more difficult to establish diaphoresis or diuresis by diaphoretics or diuretics in patients with uræmia to whom chloroform had been administered, than in those who had not taken it. I believe, therefore, that while it temporarily controls muscular spasm, it prejudices the chances of ultimate recovery, by the changes its inhalation produces in the blood, which changes increase rather than retard the uræmic toxæmia.

With these impressions, one naturally seeks an agent that not only has power to control muscular spasm, but at the same time by its action shall tend to reopen the avenues of elimination, either by counteracting the effects of the uræmic poison on the nerve-centres, and thus facilitate the action of diuretics and diaphoretics, or itself act directly as an eliminator.

I believe morphine administered hypodermically to be such an agent.

This brings me to the question which has led me to this discussion this evening, viz.:

1. Can morphine, in full doses, be hypodermically administered to patients in acute uræmia without danger?

2. What are the effects which follow such administration?

If we turn to acknowledged authorities for an answer to the first of these inquiries, we find that nearly all make mention of opium only to warn us of the danger attending its administration. I will quote from a few of them. Dr. Harley states "that although Dover's powder may be given with impunity, opium can seldom be employed in kidney affections in any other form without a certain amount of risk. More than one example of its deleterious effects in such cases has come under my notice. In cases where there is a tendency to convulsion, even Dover's powder must be cautiously used."

Dr. Geo. Johnston states that Dover's powder may be given in Bright's disease, "when the bowels are freely open, the urine not scanty, and there is no headache or drowsiness. In other cases, opium, in any form, would probably be injurious, on account of its tendency to check secretion and aggravate the symptoms of cerebral oppression. . . . In no circumstances is an opiate so likely to produce dangerous and unmanageable stupor, as when its influence is added to that of urea in the blood."

Dr. Geo. T. Elliot, in a paper on albuminuria in pregnancy, states that in uræmic eclampsia he has always used narcotics very sparingly,—codea and McMunn's Elixir of Opium being his choice. He had resorted to a hypodermic injection of morphine.

Dr. Alonso Clark in the most positive terms warns against the use of opium in uræmia.

Dr. Austin Flint, in his Practice of Medicine, states that opium should be given with circumspection, and adds that observation has shown that in moderate doses it is liable to produce marked and even fatal narcotism if the blood is surcharged with urea. In the same connection he alludes to the case of an opium-eater with Bright's disease who took a bottle of McMunn's Elixir daily, without any apparent ill effect.

It is hardly necessary to multiply quotations to show that the profession has almost unanimously lifted its voice in warning against the use of opium either in acute or chronic uræmia.

During the first years of my professional life, I regarded opium as one of the most dangerous remedial agents that could be administered to uræmic patients, rarely daring to give more than five grains of Dover's powder to a patient with albuminous urine, and if convulsions and fatal coma happened to follow such administration, more than once do I remember to have felt that a Dover's powder which I had administered might have been the cause of the fatal coma.

I will now read from the recorded histories of a number of cases of acute uræmia, which it seems to me go to show that the dangers attending the administration of opium in acute uræmia have been overrated.

These histories will also, I believe, enable us to judge to some extent of the effects of morphine administered hypodermically to patients suffering with uræmic intoxication. I shall detain you with only so much of these histories as bear upon the two questions before us.

Case I.—In the early part of March, 1868, a gentleman, 58 years of age, who for two or three years had known from his physician that he had Bright's disease of the kidneys, came under my care in a condition of general anasarca, suffering almost constantly with headache, inability to sleep, and a restlessness which compelled his attendants to be constantly moving him from one position to another.

On examination I found cardiac hypertrophy, slight pulmonary œdema, general anasarca, albuminous urine of low specific gravity, which contained finely granular and hyaline casts. The quantity of urine passed on the first day of my attendance was 44 ozs. He suffered somewhat from dyspnœa, but it was not extreme. On the third day of my attendance, his urine became markedly diminished in quantity,—his headache, restlessness and dyspnœa were greatly increased, muscular twitchings were present, his pulse became accelerated and irritable in character, beating 120 in a minute, his surface dry and hot (the temperature was not taken). Fearing convulsions, I had dry cups applied over his kidneys and plied him with diaphoretics and hydragogue cathartics without any apparent relief. Death becoming imminent, I asked Dr. Metcalf to see him with me. At Dr. Metcalf's suggestion, and under his direction, I administered to him my first hypodermic injection of morphine to a patient with uræmia, expecting to see its administration followed by a fatal coma. To my astonishment my patient soon after its administration passed into a quiet sleep, from which he was easily aroused, during which he perspired freely. On the following day he reported himself as greatly relieved; his urinary secretion was re-established, and he was able to take and retain large quantities of milk. For six weeks I administered daily to this patient from 20 to 30 drops of Mag. sol. morphine hypodermically, with ½ oz. of infusion of digitalis twice a day. During this time, not only was he relieved of most of his distressing symptoms, but his improvement was so decided that he was able to walk about his rooms and go out to ride. In about two months he went into the country, and I only heard from him occasionally. His dropsy entirely disappeared. Whether the plan of treatment mentioned was continued or not I do not know. He died the following August, so far as I could learn, in a state of collapse following an attack of what seemed to be cholera morbus. This case taught me that in some cases of Bright's disease with marked uræmic symptoms morphine could be administered hypodermically not only with safety, but with apparent advantage. Since that time I have occasionally used hypodermics of morphine in the treatment of patients with Bright's disease, especially when the premonitory symptoms of acute uræmia were present, as well as during the active manifestations of uræmic intoxication, and, so far as I am able to judge, its administration has been uniformly followed by good results. In no instance am I aware that I have caused a fatal narcotism.

The following history shows the effects of a hypodermic of morphine in uræmic intoxication, coming on during the acute stage of parenchymatous nephritis:—

Case II.—J. B., a young man, 23 years of age, of temperate habits, free from hereditary or acquired tendency to disease, early in February, 1869, came under my care with acute Bright's disease. Three week previous he had been thoroughly chilled after an exposure of two or three hours on one of the docks on a damp, chilly day.

From that time he did not feel well, suffered more or less from headache, loss of appetite and nausea. Ten days before I first saw him, he had noticed his face swollen on rising; at the same time he noticed that his urine was scanty and darker than usual. He had sent for me to relieve the pain in his head, which he described as terrible.

On examination I found his feet and legs, as well as his face, slightly œdematous; his pulse was 110, and irritable in character; skin hot and dry. He said that he had passed no urine since the previous night, but at my request voided about four ounces of smoky-looking urine which was highly albuminous; it was not examined microscopically. I ordered him to be dry-cupped over the lumbar region, a hot-air bath, and a large saline cathartic.

When I next visited him, twenty-four hours after, all his previous symptoms were aggravated. The œdema was increased; he had passed little urine, none for ten or twelve hours, and his bladder was empty; pulse 120, headache still severe, vision imperfect, was restless and at times delirious; dyspnœa not severe.

As the hot-air bath had produced very little diaphoresis, and his bowels had not moved, I ordered him one grain of elaterium, to be followed by an enema in four hours, and half an ounce of the infusion of digitalis every two hours.

At four o'clock the next morning, six hours after, I was summoned to him with the statement that he was in a convulsion. When I reached him he was semi-comatose; his friends said his convulsion lasted twenty minutes. His bowels had not been moved. I immediately administered a large enema of spirits of turpentine and oil, which was soon returned without any fæcal discharge. His muscles began to twitch, he became restless, his skin was dry and hot; pulse 130 and small. Fearing another convulsion, I administered hypodermically fifteen drops Mag. sol. morphine. Gradually the muscular twitchings ceased, he became quiet, and passed into a heavy sleep. I remained with him. In about two hours after the administration of the hypodermic, his surface was covered with a profuse perspiration, and his breathing became more natural. He could be aroused, and would swallow when fluid was placed in his mouth; four hours after with a catheter I drew off five or six ounces of highly albuminous urine, which contained blood and granular casts. Six hours after, I commenced the administration of the infusion of digitalis, a tablespoonful every two hours; he was sleeping quietly, perspiring freely, could be easily aroused. I then left him.

At my next visit, ten hours after the administration of the hypodermic, I found him sleeping,—skin moist

pulse 100, could be easily aroused and drank freely of milk. At my request he passed six or eight ounces of urine; his bowels had moved freely twice.

From this time, under the daily administration of digitalis and mur. tinct. ferri, and a milk diet, he went on to complete convalescence.

This was a somewhat rare case of acute parenchymatous nephritis occurring independent of any known blood-poison.

It shows in a striking manner how difficult it is to get the action of diaphoretics, diuretics, and cathartics, when the symptoms of acute uræmia are present in such cases, as well as their failure to prevent the occurrence of convulsions. The administration of a full dose of morphine, at apparently the most unpromising period in the history of the case, not only seemed to prevent an impending convulsion, but aided in the establishment of a saving diaphoresis and diuresis.

The two following histories have been furnished me by Dr. H. B. Millikin, late House-Physician to Bellevue Hospital.

Case III.—J. C., a German dyer, 70 years of age, was admitted into Bellevue Hospital, April 22d, at 6 P.M.

He was brought to the hospital in a state of uræmic coma. Body of large size, well nourished, surface cold and cyanotic. Extremities and thoracic walls œdematous. Head rolled back, mouth open, tongue dry and brown. Pupils dilated, not responding to light. Respiration 14, irregular and stertorious; breath cold. Pulse 96, and hardly perceptible; temperature 95°. Muscular tremors marked in the arms and hands. Catheter was introduced into the bladder, and about an ounce of urine drawn off, dark colored and smoky, highly albuminous, no casts. Lungs resonant and respiration feeble. Heart enlarged and sounds feeble. Abdomen tympanitic. Injected ten minims of Mag. sol. morphine hypodermically, and wrapped the patient in blankets. In one hour the surface became warm, the patient began to perspire freely, cyanosis disappeared, breathing became more regular and less stertorous. Pulse 100, and stronger; is sleeping quietly; swallows water when placed in his mouth. Ordered an enema, and left him for the night.

The next morning, at 9 o'clock, found him much improved. He slept all night and perspired freely. Pulse 80; temperature 97°; respiration 21; expiration somewhat stertorious. Has voided about four ounces of highly albuminous urine, specific gravity 1016. No casts. Ordered ½ oz. of infus. digitalis, with 20 grains of bi. tart. pot. every two hours. The next morning, April 24th, condition still improved, is easily aroused, and answers questions. Pulse 84, and stronger; respiration 18, and quiet; temperature 97½°. Has voided 3 pints of urine within past twelve hours, containing a trace of albumen, large granular and hyaline casts, and renal epithelium filled with fatty matter. From this time patient daily improved, and was discharged from hospital May 14th, 1871.

In this case the morphine was administered while the patient was in a state of complete coma. Instead of deepening the coma, in one hour after its administration diaphoresis was established and the uræmic symtoms began to abate; within twelve hours the urinary secretion was fully re-established and convalescence had fully commenced.

Case IV.—C. M., a barber, 21 years of age, was admitted to Bellevue Hospital at 4 P.M., April 24th, 1871.

He was brought to the hospital by his uncle, from whom I obtained his antecedent history. The uncle stated that the patient's father and mother had died of Bright's disease; that he had been given to excesses of various kinds, but especially to the use of intoxicating drinks, but had enjoyed good health until about two months previous to his admission into the hospital, when he began to grow pale and feeble, lost all desire for food, suffered from dyspnœa on active exercise, and complained continually of frontal headache and severe lumbar pains. On rising in the morning he experienced mild attacks of vertigo, dimness of vision, nausea and vomiting, often rejecting his morning meal. His bowels had been obstinately constipated, several days often elapsing without any evacuation. One month previous, he first noticed swelling of his face, especially about the eyes, which he said was most marked in the morning after rising. He had spoken to his uncle of the diminished quantity of urine passed, which fact seemed to cause him anxiety and alarm. The day previous he had several convulsions, which he came out of slowly, and remained in a semi-comatose state until about two hours before his admission into the hospital, when the convulsions again recurred. He had passed no urine for twenty-four hours.

Condition on admission.—Patient is of medium stature, and somewhat emaciated, surface pale, hot and dry. Countenance markedly cachectic. Face swollen and œdematous, the œdema also invading the thoracic and abdominal walls and slightly marked over the surface of both tibias. He moves restlessly in bed, rolls the head from side to side on the pillow and throws his arms wildly about. Any effort made to restrain him aggravates his nervous state, when he gives some evidence of returning consciousness. Both pupils are dilated, responding slowly to light. Conjunctivæ pale and anæmic. Pulse 100 and irregular; temperature 100¼°. He cannot be aroused so as to answer questions.

Physical examination of chest and abdomen.—Percussion negative. Auscultation furnishes a few sonorous râles over both lungs posteriorly. Heart's action tumultuous with loss of rhythm. Apex beat felt in sixth intercostal space, and to the left of the nipple. No murmur could be heard. Abdomen depressed and moderately tympanitic. Liver and spleen of normal size. An elastic catheter was then passed and one ounce of high-colored urine drawn off; when examined it was found to be gelatinous with albumen (specific gravity not taken), but furnished no tube-casts or renal débris under the microscope. His restlessness still continuing, I injected ten minims of Mag. sol. of morphia into his right arm, and had him wrapped up warmly. I remained with him one hour, when he passed into a quiet sleep, and I left him. At 6 P.M., two hours later, I again visited him, and found that his jactitation and nervousness had entirely disappeared and that he was sleeping soundly. He could be easily aroused, and when interrogated as to how he felt, said he was nauseated and had pain in his head. Skin still hot, but perspires freely. He has voided no urine and his bowels are still confined. Pulse 120, and more regular; temperature 99°. Heart's rhythm restored, so that a mitral regurgitant and aortic obstructive murmur could be heard. Injected six minims more of Mag. sol. of morphia under the skin, and ordered ½ oz. of infus. digitalis to be given every two hours,—his bowels to be moved by an enema, and warm blankets to be wrapped around him.

9 P.M. Three hours from last visit I again saw him. He was sleeping soundly, easily aroused, but soon lapsed into sleep. Breathing sonorous. Surface cover-

ed with profuse perspiration. Pulse 120°; temperature 101°. No urine yet voided. Enema failed to act. Ordered the digitalis to be given every hour and warm flannels to be applied to the abdomen. The next morning at 10 o'clock his condition much improved. Pulse 120; temperature 101°. Respiration normal. Voided two pints of cloudy urine, with a spec. gravity 1010,—considerable albumen, acid, granular casts, and fatty epithelium.

April 26th, 9 A.M. Bowels had moved freely. Œdema very much diminished. Continued to improve until May 11th, when he was discharged. Have since heard that he had another attack of convulsions and died.

This patient was brought to the hospital in a semi-comatose state, with almost complete suppression of urine, after successive convulsions occurring at intervals for 24 hours. He began to manifest the characteristic symptoms of Bright's disease about two months before the occurrence of the convulsions, and at the time of their occurrence was undoubtedly already in the second stage of parenchymatous nephritis.

The first hypodermic injection of morphine arrested the convulsive movements, and was followed in two hours by profuse diaphoresis. Two hours after a second hypodermic injection was administered, and the internal use of digitalis was commenced, but there was no evidence of a return of the urinary secretion until twelve hours after the second hypodermic injection was administered; still, during this period of urinary suppression, there was no return of the convulsions.

After the re-establishment of the urinary secretion, his convalescence was rapid, at least up to the time of his leaving the hospital. His subsequent death in a convulsion is evidence of the progressive character of his renal disease.

The abstract of the following case is taken from the note-book of Dr. Katzenbach, House-Physician to Bellevue Hospital during the service of Dr. Flint:—

CASE V.—E. G., a seaman, 23 years of age, was admitted into Bellevue Hospital on the 28th of June, 1872, with congestive remittent fever, which he contracted in Savannah. Under large doses of quinine his febrile symptoms disappeared in about ten days; his convalescence was slow and he remained in the hospital. About the middle of July, his face, feet, and legs became œdematous and his urine scanty. The œdema gradually increased, and on the 24th the urine was found of low specific gravity, albuminous, and contained granular casts.

He went on with all the ordinary symptoms of chronic Bright's disease. His anasarca gradually increases, his urine varying in quantity from 12 to 30 ounces in the twenty-four hours. Specific gravity varying from 1008 to 1020. He was treated with frequent cuppings over the lumbar region and hydragogue cathartics.

On the 13th of August, about 1 P.M., he was seized with a convulsion. Dr. Katzenbach (House-Physician) was called, and found him in a semi-comatose state. The convulsive movements continuing, he immediately administered ten minims of Mag. sol. morphia hypodermically, and soon the patient passed into a quiet state. At 7 A.M., six hours after, the patient was in a comatose condition, and ¼ of a grain of elaterium was ordered every hour. During the day he had several convulsions, and in the evening the elaterium had not acted upon the bowels, although 1½ grs. had been administered.

On the next day the patient was conscious; had no return of convulsions; bowels moved once. He was then put on ½ an ounce of infus. digitalis twice a day, with frequent application of dry cups to lumbar region. He steadily improved, and on the 22d of August was able to go about the ward, although his anasarca diminished but little.

On the 26th of August, his urine becoming scanty, he was ordered hot-air baths daily, ol. of juniper by inhalation, and ten grains of Dover's powder each night for three days.

Gradually he again improved, so that on the 9th of September he was so much relieved that he asked for his discharge from the hospital, which was not granted. On the morning of the 14th of September he was seized with another convulsion, during which 10 drops of Mag. sol. morphia were administered hypodermically. In half an hour the convulsion recurred, and continued to recur every two hours till midnight, when, his breathing becoming difficult, another hypodermic of 10 minims Mag. sol. morph. was administered. Soon after which he fell asleep, and his skin became covered with a profuse perspiration. Pulse during and after the convulsion was 150 and feeble; his urine was passed involuntarily.

At 11 o'clock the next morning, two more convulsions occurred, and another hypodermic of 10 minims Mag. sol. morphia was administered, after which he slept quietly, perspiring moderately until 3 o'clock in the afternoon, when another convulsion occurred, and a hot-air bath was given, which was immediately followed by two convulsions. After the second convulsion, another hypodermic of 10 minims of Mag. sol. morphia was administered. At 10 o'clock the same evening his pulse fell to 66; he was sleeping and perspiring freely; no symptoms of convulsions.

The next morning he was much improved. Pulse 64, sleeping quietly, breathing natural; has passed 48 ounces urine during the last twenty-four hours. Specific gravity 1012, alkaline and albuminous.

From this time he continued to improve, and left the hospital the latter part of September, improved.

This is a well-marked case of chronic parenchymatous nephritis, which was treated with cups over the lumbar region and hydragogue cathartics for a month before the occurrence of the first convulsion; 10 minims of Mag. sol. morphia were administered hypodermically immediately after the first convulsion, while the patient was comatose, which seemed to have little or no effect, for the convulsions continued at intervals for 24 hours, and, although 1½ grs. of elaterium were administered during this time, there was no cathartic action from the bowels until some time after the convulsion ceased. He was put on diaphoretics, diuretics, and cathartics. One month later another series of convulsions and coma occurred, lasting 48 hours, during which time 40 minims of Mag. sol. morphia were administered hypodermically—10 minims after each of the first four convulsions—which had the effect of temporarily arresting the convulsions and causing profuse diaphoresis.

After the last hypodermic injection, he fell into a natural sleep, and the fall of the pulse and of the temperature with profuse diaphoresis marked the commencement of his recovery.

Morphine was not fully tested in this case, for it was not given immediately preceding the convulsions, and other remedial agents were employed in connection with it; it was given, however, in large quantities and did not produce narcotism.

The histories of the two following cases of uræmic convulsions have been kindly furnished me by my friend Dr. B. W. Dudley. I present them in full as I have received them from him.

288 Fifth Avenue,
New York, Feb. 20, 1873.

Dr. A. L. Loomis:

My Dear Doctor,—Please find enclosed a history of Mr. Flannagan's case, which you saw with me in 1871, and which in compliance with your request I now detail to you.

Trusting that the history I give of the case may be sufficiently full for your purposes,

I am, sir, very respectfully,
B. W. Dudley.

Case VI.—Mr. F. called on me about 9 A.M., in the winter of 1871. As he entered my office, I observed that his face was swollen, and that he was suffering with considerable dyspnœa; said "something was the matter with his lungs, wanted me to find out what it was, and relieve him as soon as possible."

I found œdema at lower portion of each lung and bronchitis. The abdomen seemed to be enlarged, and felt puffy; looked as though it contained fluid, but I was unable to determine that point positively. The liver felt hard, and was certainly, though not much, diminished in size. Legs and feet swollen, some pain over the region of the kidneys. He had passed but little urine since the day previous—probably for about twenty hours; had been passing less than normal for several days.

I asked him to make an effort to urinate, and obtained about six ounces of cloudy urine, sp. gr. 1009, slightly acid, loaded with albumen.

I poured it into a glass, to settle for microscopical examination; directed him to go home, send for a cupper, and have dry cups placed all over the back and lower portion of the chest, and promised to see him soon. An hour later I obtained enough yellowish-white sediment to examine under the microscope, and found it contained pus, epithelial and blood casts in abundance. Dr. Polk examined it a few hours later with same result.

I saw him about 11 A.M.; found he had been freely cupped, and was breathing somewhat easier, but had considerable pain in the head. P. 115, feeble; t. 103; skin dry. I concluded I had to deal with a case of acute nephritis, and knowing but little of previous history, and that not very satisfactory—"was a drinking man; did not know whether he ever had kidney disease or not," was about all. So I determined to do battle with the trouble that was threatening the most immediate and serious consequences; and having but a few days previous heard Dr. Loomis express his views on the use of digitalis in such cases, I immediately sent for the following mixture:

℞. Infus. digitalis..... ℥iv.
Pot. acetat..... ʒiv. M.

Learning it would take nearly three hours to prepare the infusion, I went to a hotel near by, telling them to send word when the medicine arrived. I had been gone but a short time when I was called, and found the attendant much alarmed; said "the patient was in convulsions for several minutes." As soon as Mr. F. recognized my voice, he said he was suffering agonizing pain in his head, and insisted on my doing something to relieve him. P. 122; t. 102⅘; skin dry. I gave a hypodermic of ℥xv. of Magendie's sol. morphia, with gr. ¼ atropiæ sulph., which relieved him in a few minutes, and he went to sleep. The digitalis mixture came about 3 P.M., when I gave him a tablespoonful; and as he felt easy I left, stating that I would return in two hours.

Called again at 5 P.M., found him suffering a good deal with pain in the head again. P. 126; t. 103; skin dry; twitching of muscles of face; gave hypodermic ℥xv. Magendie's sol.; he became quiet and went to sleep.

5.30 P.M. I awakened him to give another dose of digitalis mixture, same quantity as before, and gave directions to repeat the mixture, at 7.30 and 9.30, if I did not return, and again left him.

I returned at 9 P.M. Patient had been perfectly quiet and comfortable. P. 105; t. 101; skin moist. He expressed a desire to pass water, and did pass fully a pint.

9.30 P.M. Gave ʒ ij. digitalis mixture, and directed it to be repeated at 1.30 A.M. and 4.30 A.M., and advised consultation; was given permission to bring any one I wished.

Dr. A. L. Loomis called with me the following morning, and after a careful examination was of the opinion that there was no danger of a return of the convulsions at present; advised digitalis to be continued with mur. tinct. ferri. He improved rapidly.

About two months later, Mr. F., feeling perfectly relieved and unusually well, again exposed himself during cold, chilly weather, which brought on another attack of acute congestion of the kidney, which was rapidly followed by convulsions, coma, and death. I saw him in this attack only a few hours before death, and did not prescribe for him at all.

This patient, when first seen by Dr. Dudley, was probably in the acute stage of the inflammatory form of Bright's disease—there was almost complete arrest of the excretory function of the kidneys, and the premonitory symptoms of acute uræmia were well marked.

The first convulsion was a severe one, and, in accordance with the usual history of such cases, was sure to be followed by a second. The first large hypodermic injection of morphine seemed to arrest the impending convulsion for about three hours, when the administration of a second controlled all muscular twitchings, established a profuse diaphoresis, and so far overcame the toxical effects of the urea that under the free administration of digitalis for four hours the urinary secretion was re-established.

This case also shows the effects in acute uræmia of morphine hypodermically and digitalis internally, uninfluenced by any other remedial measures.

New York City, Feb. 8th, 1873.
288 Fifth Avenue.

Dr. A. L. Loomis:

Dear Doctor,—In accordance with your request you will please find enclosed the history of Mr. D.'s case, including the results of Dr. H. D. Noyes's ophthalmoscopic examination. The case being one of considerable interest, I give a brief sketch of history from the beginning of his troubles.

I am, sir, very respectfully yours,
B. W. Dudley.

Case VII.—Mr. D. first came under my observation in October, 1871. He had contracted specific disease about eighteen years previous, and had been excessively mercurialized; was much exposed early in the late Southern war, and obliged to leave the service; went to a tropical climate in 1862, where he contracted malarial fever, which was followed in March, 1863, by an uncontrollable diarrhœa. In June, 1863, hemorrhages from the bowels occurred with the diarrhœa, and he returned to his home in New York, in March, 1864, thinking he had but a few days to live. His legs, feet, hands, and face were swollen, and his complexion was almost copper-colored. In this condition he went under the care of a homœopathist, and was treated for "disease of the liver." Growing worse under

this treatment he left him after several months, and was in the hands of several physicians, one after another, until October, 1871, when he consulted me.

He was broken in general health, anæmic, and had a puffed appearance, complexion about lemon-colored; was in the habit of taking from 3 to 4 grains of morphine in 24 hours, to relieve his suffering. With the above symptoms, and after careful and repeated physical examinations, and also examinations of the urine, I diagnosed "waxy degeneration of the *liver, spleen,* and *kidneys,* and hypertrophy of the left heart with mitral stenosis."

Considering his condition a critical one, I advised him to see Dr. Metcalfe or Dr. Loomis, and get an opinion from either of them before proceeding. He saw Dr. Loomis, who confirmed my opinion, and in addition pronounced the bowels to be in a state of "waxy degeneration" also, and advising him to leave New York for the winter, recommended him to go to Arkansas Springs.

Not wishing to go to Arkansas, I advised him to go to Florida, which he did; and under tonic stimulants and good nourishment, he returned to New York in March, 1872, much improved, and continued well, or rather *greatly improved,* until about January 1st, 1873, when the kidneys began to give him trouble: urine sp. grav. 1012, acid, and contained albumen, blood, and epithelial casts; quantity about as usual. After a few days' treatment, the kidneys being relieved, he again looked like a healthy man, and said he felt "very well."

The hemorrhages from the bowels still continued, but did not appear to compromise his strength much, so that I simply paid attention to his general condition. Everything progressed favorably until

Jan. 26.—11 A.M. I was called, and found him complaining of sore throat and some difficulty in swallowing; mucous congestion of pharynx, and a few small follicular ulcerations; prescribed for them without noticing anything further of interest.

Jan. 27.—5 P.M. Was called again. On arriving I found the patient comfortable, but he had been suffering with severe headache, nausea, and complained of dimness of vision, symptoms under the circumstances very suspicious; but as he had been relieved and easy for an hour or more, only complaining of being unable to see distinctly, and had passed water during the day, my apprehension was relieved; so I ordered gum camphor with comp. spts. ether if the sickness should return, and requested to be sent for if it became severe.

8 P.M. Headache returned with great severity. Nausea and vomiting and amaurosis, could distinguish nothing in a well-lighted room, and at

8.45 P.M. went into a severe convulsion, which lasted about 15 minutes.

As I could not be found, Dr. Pinckney was called, and at about

10 P.M., the patient passing into another convulsion, Dr. P. applied dry cups to the lumbar region, cold to the head, hot bottles, etc., to the lower extremities, and gave gr. xx. bromide of potassium.

11.15 P.M. Another convulsion about as before; same treatment continued.

12.20 A.M. Convulsion; above treatment continued.

I reached the patient at

1.45 A.M. Dr. P. having left about 1 o'clock, I took charge. Patient was drowsy or semi-conscious, would answer questions when aroused; p. 108, weak and intermittent. Axilla temp. 102°, resp. 10, skin dry; entire loss of vision; complained of great pain in head and *eyes;* had passed no urine since the morning before, being about 18 hours. His mother says he fell into a sleep after each convulsion; seems to be sleeping now. While again taking temperature—which went to 103—I was obliged to remove the thermometer, as he threw up his arms, groaning and complaining of pain in the head and eyes, and almost immediately went into a convulsion, which lasted fifteen minutes. Knowing that he had been exposed to cold a few days previous, I concluded that the case was one of uræmic poisoning caused by an *intercurrent* acute *nephritis,* occasioned probably by exposure to cold, and as the paroxysm was passing off, I administered ℥xx. Magendie sol. morphine hypodermically; he soon passed into what appeared to be a quiet sleep; p. 110, t. 102, resp. 10, skin dry.

3.45 A.M. Roused up, complaining of pain in the head, and threw his arms up as before, and had some twitching of the muscles of the face. I immediately gave ℥xv. Mag. sol. hypodermically. After a few slight convulsive movements, he became quiet, breathing easily and sleeping. Having sent for a soft catheter, I attempted to draw off his urine or to ascertain if secretion was going on, but before I had drawn a teaspoonful he knocked my hand with the catheter from him, and said he wanted to urinate, and did pass about four ounces—which, with what he afterward passed, was thrown out by mistake—and again went to sleep. He was quiet until

4.40 A.M. Woke and asked for water. P. 130, t. 106, resp. 15, skin hot and dry; again becoming restless, and exclaimed, "For God's sake, relieve this pain in my head," throwing his arms up to his head, muscles of face and hands twitching: gave ℥xv. Mag. sol. hypod.; convulsive movements occasionally for ten minutes, when he went into a terrific convulsion which lasted *twenty-seven* minutes, from which he passed into profound coma. The bronchial tubes seemed almost filled with mucus, breathing was very superficial, blue around the eyes and mouth; in fact, the whole face and neck became cyanotic. Fearing his death was near at hand I called the family, and as he seemed sinking rapidly, I left the room. His breathing could be heard on the floor below with the doors closed. I was soon recalled with announcement that the "patient was dead," and when I saw him supposed he was. Could feel no pulse at wrist, was not breathing, could hear no sounds over the heart, but while I was examining, he gasped a few times and again began his short, labored breathing; pulse scarcely perceptible. Chloroform, which had been tried without benefit before, was again administered, but when, or as soon as it was given, his breathing ceased, and again I supposed he was dead, and directed the chloroform to be removed. After pressure upon the abdomen had been exerted a few minutes, he again began his short, harsh breathing, and was quiet. P. 130, t. 105, skin hot and dry. He remained in this until

7.30 A.M., when his face and hands began to twitch, and he tried to put his hands to his face. Fearing another convulsion I again resorted to the morphine, and gave a hypod. of ℥xv. Mag. sol. with gr. $\frac{1}{4}$s. sulph. atropia, which quieted him in a few minutes; breathing became easy, and he slept quietly.

8.30 A.M. Woke, asked for water; skin slightly moist; p. 108, t. 103; passed six ounces cloudy urine, and went to sleep again.

10 A.M. Still sleeping; p. 105, t. 98, resp. 12, skin moist; complained of thirst; gave him ice and ordered ℥ss. brandy in milk every hour.

Having a professional appointment of importance at 10.30, Dr. A. A. Smith kindly consented to remain with the patient during my absence. I returned at

12 M. Patient had been sleeping nearly the whole time I was gone; skin quite moist; p. 90, t. 96; *perfectly rational*; has no knowledge of what passed during the night; drank water freely and slept most of the time until

3 P.M. Woke with great pain in his *eyes*; could see nothing, could distinguish no one, either near or at a distance. Some muscular contractions of face; p. 86, t. 97, skin moist; gave hypode. ℳx. Mag. sol. with $\frac{1}{10}$ gr. atropia; he soon went to sleep.

I sent for tr. digitalis, intending to administer that hypode. also, fearing his stomach would reject it. While waiting for the digitalis, advised the family to call consultation. They consenting, Dr. Loomis was sent for.

4.20 P.M. Patient again woke with same symptoms; complained particularly of pain in *eyes*, and could not see. Knew my voice; pain growing worse; gave hypode. ℳxv. Mag. sol.; he went off to sleep, and breathed naturally.

5 P.M. Dr. Loomis arrived. After hearing a history of the case, and examining the patient—patient recognized Dr. Loomis—he coincided with my views and approved of the treatment, and thought his stomach would bear digitalis if given in infusion.

I immediately sent for the infusion, which required about two and a half hours to prepare. Dr. Loomis advised, while waiting for it, to try the tr.

5.30 P.M. P. 86, t. 98¾, pupils dilating, skin moist; I gave ʒ ss. tr. digitalis, which sickened but did not vomit him. Slept some; when awake was perfectly conscious; not so much pain in head and eyes.

7.30 P.M. P. 80, t. 98¾, breathes easily, skin moist; gave ʒ ss. tr. digitalis, which he immediately rejected, and I gave a hypode. ℳx. tr. digitalis.

8 P.M. P. 78, t. 99. Is asleep and sweating profusely.

9.30 P.M. Can see much better; no pain in head and but little in the eyes. P. 84, t. 99½; asleep, sweating profusely. I now began with infusion digitalis; giving ʒ ss. with ʒ ss. acet. potash.

11.30. P.M. P. 76, t. 99½, skin very moist; gave infusion digitalis ʒ ss. acet. potash ʒ ss.

12.30 A.M. P. 66, t. 100. Feels comfortable; asked him to try to pass water, which he did, and passed 22 *ounces*; continued brandy and milk at longer intervals. Went to sleep.

5 A.M. Condition about the same as when last recorded. Gave infus. digitalis, ʒ ij., acet. pot., gr. xv.

6 A.M. Condition about same. Brandy, ss., milk, Oss.

9 A.M. Continues about same. Infus. digitalis, ʒ ij., acet. pot., gr. xij.

10 A.M. P. 74, t. 98¾. Can see perfectly well; no pain in head or eyes, skin moist, breathes naturally; passed a pint and a half of urine.

Milk and brandy.

Patient continued to improve, takes only nourishment, and Thursday, Jan. 30, began taking quinine, gr. v. every 4 hours.

Feb. 12.—Continues to improve; says he "feels perfectly well." Sits up most of the day. Temperature of the room kept constantly at 70°.

RESULTS OF OPHTHALMOSCOPIC EXAMINATION BY DR. H. D. NOYES.

"Examination on the fourth day after the attack of convulsions began, and twenty-four hours he was fully relieved. Vision not yet perfectly clear; sees imaginary figures on the wall of men and things; pupils act promptly to light; irides light blue.

"During the winter he began to use concave glasses —16.—because he thought he was becoming short-sighted; objects across the street were not distinct.

"By ophthalmoscope: find media clear, the refraction so nearly normal as to allow of a myopia not greater than one-thirty-sixth. By upright image a distinct view of fundus gotten. In it no hæmorrhage or pronounced change: the 'macula lutea' seen tolerably well; but while the retinal vessels were distinct, the retinal tissue was not well perceived; it looked foggy and soaked, as if there had been recently an œdema. The optic nerves show plainly, and the edges have a little haziness, not so as to cause any difficulty in defining the border, but it is rather less sharp than natural; a slight amount of swelling in the nerve. The nerve-substance not perfectly transparent; has a dull, sodden, and greasy or waxy look. No capillary hyperæmia. The arteries *remarkably small*, the veins a little larger, but both attenuated to a degree seen in some cases of atrophy. In the right eye the veins a little tortuous; not so in the left.

"The impression made by the examination is, that there has been a decided œdema of the retina and optic nerve, and the effusion has been great enough in quantity to distend the globe and give rise both to the pain in the eyes and the loss of sight. This transudation, of course, penetrated the vitreous humor, and when the kidneys resumed function, the eyes were relieved. A further inference is that a similar transudation has existed in the brain and cranial cavity; that this is the mechanism of the headache, convulsions and stupor; that very little *vascular* congestion was present or possible, as it is certain there could have been none or little in the eyes.

"*Query.*—Are not uræmic coma and convulsions simply the expression of a water-logged brain, as amaurosis and pain arise from infiltrated nerves, retina, and globes?"

This is an exceedingly interesting and remarkable case, not only on account of the large amount of morphine administered during 12 hours, but the fact of recovery after so many and so severe convulsions. The patient had for years suffered moderately from uræmic poisoning. But sudden renal congestion from exposure to cold caused a complete arrest of the functions of the already damaged kidneys, which was almost immediately followed by the symptoms of acute uræmia.

During the first 8 hours of his convulsions, he was faithfully plied with diaphoretics and cathartics without obtaining the action of either, during which time his convulsions increased in severity, and his case seemed hopeless. (The exceedingly large doses of morphine borne by this patient may have been due somewhat to the fact that some years before he became accustomed to its effects.) The first large hypodermic of morphine seemed for a time to arrest the progress of the disease, but the exciting cause of the convulsive seizure was so potent that the struggle between it and the arresting agent became a desperate one, and not until the system was overwhelmed with the morphine did its controlling action show itself.

During the active period of the convulsion, the temperature and pulse were both high. The fall in temperature and pulse marked the subsidence of the convulsive paroxysm.

From this case as well as others that have come directly under my own observation, I am of the opinion that the rule which is to govern us in the hypodermic administration of morphine in uræmic convulsions is to give it in quantities sufficiently large, and frequently repeated, to control the convulsions. Especially will this hold true in uræmic eclampsia. Dr. Dudley bold-

ly pushed the remedy which he believed was the only one that gave his patient any chance of recovery, and his boldness apparently saved the life of his patient. As regards the efficacy of hypodermics of morphine in the treatment of uræmic eclampsia, my own experience has been limited to a single case, the main points of which are as follows:—

Case VIII.—Early in April, 1870, Mrs. W., a young woman, 22 years of age, in the eighth month of her first pregnancy, consulted me in regard to a severe pain in her head, from which she said she had suffered for two or three weeks. On examination, I found her feet and legs œdematous, her urine highly albuminous, containing granular, epithelial and fatty casts.

I warned her family of her danger, and prescribed for her the daily use of mur. tinct. ferri and digitalis, with the frequent application of dry cups over the lumbar regions. Her headache was somewhat relieved, and she passed on to the commencement of her labor without any other unpleasant symptoms. The albuminous urine and œdema continued.

I was called to see her about six hours after the commencement of her labor. Everything seemed to be progressing favorably. The os uteri was dilated to the size of a half-dollar, but was rigid.

After watching the case for an hour or more, I noticed that she was becoming restless, her pulse became slightly accelerated and irritable in character. All at once she began to complain of pain in her head, at times screaming out on account of its severity.

I introduced a catheter into the bladder, but could get only about half an ounce of urine—was told she had not passed urine for 10 or 12 hours.

Suddenly she passed into a convulsion, which lasted about 10 minutes, after which she became partially comatose. The labor continued regular, and the process of dilatation went on rapidly. In about half an hour she began to be restless. Fearing another convulsion, I administered hypodermically 15 minims of Mag. sol. morphia. Immediately her restlessness ceased, and her labor progressed more rapidly than before. Two hours after the hypodermic injection, the os being fully dilated, and the head well down in the pelvis, I applied forceps, and easily completed the delivery of a small child. She then passed into a quiet sleep, her pulse falling to 100. I remained with her an hour or more, and left her sleeping quietly.

In about two hours I returned and found her just passing into another convulsion; immediately I injected 10 minims of Mag. sol. morphia. The convulsion lasted 15 minutes, and she passed into a more profound coma than before. In one hour the muscles of her right arm began to twitch, and I injected 10 minims more of Mag. sol. morphia. Her breathing soon became stertorous, her pulse almost imperceptible, and I thought her dying.

Gradually the stertor passed away,—her breathing became like that of one in quiet sleep,—her pulse gradually diminished in frequency and improved in character,—her skin became bathed in profuse perspiration. I did not allow her to be disturbed, and after remaining four hours in this condition, she roused to consciousness and asked for a drink, which she readily swallowed.

Her urinary secretion was soon re-established; she passed on to a complete but slow convalescence, and entirely recovered.

In this case I did not use chloroform, or any of the remedies usually employed in the treatment of uræmic eclampsia, for this reason: that the only two cases of uræmic eclampsia that had occurred in my practice had terminated fatally after the usual remedial agents had been resorted to (in one, general bleeding was twice practised by advice of the late Dr. Gillman).

I am aware that a single case proves very little, in regard to a plan of treatment, but this case, it seems to me, shows the power of hypodermics of morphine to control muscular spasms, excite diaphoresis, and perhaps diuresis, in a patient in uræmic eclampsia.

In an August number of the Med. Record of 1868 I find a much stronger support of this plan of treatment in uræmic eclampsia.

In a paper on the Diagnosis of Albuminuria in Pregnancy, etc., by Dr. F. D. Lente, is a letter from Dr. White, of Fishkill, which reads as follows (*vide* page 265, Vol. III.):—

"Case IX.—Dr. White says: 'I was called to visit her (Mrs. M—) at 5½ P.M. on Friday, 22d February, 1867. I found her in a comatose and insensible condition, having had two convulsions before I arrived. She had been complaining during the day of what they call sick-headache up to the time the convulsions came on. The pulse was full, skin hot, bowels constipated; very considerable œdema (of lower extremities). The time of her expected confinement had arrived, but no evidence of labor. I bled her sixteen ounces from the arm, applied ice to head and mustard to the neck, and gave 15 drops of Mag. sol. morphia. Within half an hour she had another convulsion, when I sent for you (Dr. Lente); and about the time you arrived she had another, when you injected the arm (with morphine ½ grain), and had her bowels moved by an enema, and the bladder evacuated by the catheter; by which operation we obtained but a small quantity of urine, there evidently being but little secretion. After this she had no more convulsions. Whenever she became uneasy, and gave evidence of their return, she had an injection per *anum* of one grain of morphine; this was repeated every six or eight hours, three times, when all unpleasant symptoms disappeared.

"'The kidneys became active soon after she was fully under the influence of the morphine. During the day and night of Saturday, she voided seven and a half pints of urine of a natural color. After this I made no note of the quantity, but remained with her until 3 o'clock Sunday afternoon. The following morning, at 8 o'clock, I was called to her, and found her in labor; and at 11 o'clock A.M. she was delivered of a full-sized child, with no unpleasant symptoms during or after the labor. She recovered rapidly, and has enjoyed uninterrupted good health since. I saw her this week, and found her in perfect health, and in the sixth month of pregnancy.'"

In connection with this case Dr. White makes the following remarks:—

"I made a verbal report of this and five other cases of puerperal convulsions (that I have had within the last two years, all treated with morphine and all terminated favorably) to our County Medical Society, at the semi-annual meeting in January last, and two cases were reported by Dr. G. L. Sutton, in which I was in attendance with him, which were treated with morphine and resulted favorably. It provoked a very spirited discussion by the members of the Society, a majority of whom had treated their cases with chloroform, bleeding and veratrum. But they were free to acknowledge that the mortality was fearfully great."

In a letter from Dr. Lente, dated March 3d, 1873, in answer to inquiries made by me in regard to his treatment of uræmic eclampsia, he makes the following statement:—"I remember one very bad case of convulsions in a primipara, some 9 or 10 years ago; they

commenced before any signs of labor appeared, and continued for several days before the pains set in, and also for a couple of days after labor, if I remember rightly. I was called in consultation. Chloroform was administered at first, and continued until it seemed as if the patient would die each time, while under the combined influence of the convulsion and the remedy. I had not then the experience with morphine in these convulsions which I have had since, and hesitated to advise it; but being driven to it, I gave hypodermic injections, with the effect of promptly relieving the paroxysm, and relieving the patient for several hours. These were continued for several days. The patient recovered well and has been well since, having borne other children, with no recurrence of albuminuria."

These histories and their accompanying statements go far, it seems to me, to place hypodermics of morphine among our most reliable agents in controlling this terrible form of acute uræmia; and it would appear, that if a large hypodermic of morphine be administered at the onset of uræmic eclampsia, and repeated whenever the premonitions of a convulsion are present, we offer these distressing cases the best chance of recovery.

I have no experience in the treatment of acute uræmia following surgical operations on the urethra.

The only patient I ever saw with uræmia under such circumstances was in a moribund condition when I was first called to him. From his history I should infer, if morphine is ever to be resorted to in this class of cases, it should be given as soon as the premonitory symptoms appear, not for its power of preventing or controlling muscular spasms, but as an eliminator.

I am not aware that any case of this class has been treated with hypodermics of morphine.

In the histories of the ten cases given I think we find answers to the two questions asked at the commencement of this discussion:

First.—That morphine can be administered hypodermically to some if not to all patients with acute uræmia, without endangering life.

Second.—That the almost uniform effect of morphine so administered is—1st, to arrest muscular spasms by counteracting the effect of the uræmic poison on the nerve-centres; 2d, to establish profuse diaphoresis; 3d, to facilitate the action of cathartics and diuretics, especially the diuretic action of digitalis.

Thus morphine, administered hypodermically, becomes a powerful eliminating agent.

The rules which are to govern its administration are as yet not well defined. My own experience would teach me to give small doses at first,—not to exceed ten minims. If convulsions threaten, and a small dose does not arrest the muscular spasms, it may be increased to twenty minims, and the hypodermics may be repeated as often as every two hours. It must be given in sufficient quantities to control convulsions; neither the contraction of the pupils nor the number of the respirations is a reliable guide in its administration.

It has not been my purpose, Mr. President, in this paper, to discard all, perhaps none, of those means which have been relied on for the relief of patients in acute uræmia, but to bring to the notice of the profession the fact, that in a certain proportion of cases (if not in all) of acute uræmia, hypodermics of morphine will not only control muscular spasms, but aid in establishing the eliminating processes, and thus become another means of saving life in these too often fatal cases.

Progress of Medical Science.

Treatment of Malignant Pustule in Portugal.—Dr. Belles, practising in the districts of Béja and Faro, where malignant pustule is very frequent, in consequence of the number of cattle raised there, says he has treated hundreds of cases of this affection without having noted a single death, no matter how advanced the case was at the time of operating. The treatment employed by Dr. Belles consists in crucial incision of the boil throughout its whole extent, in depth as well as breadth, and cauterization with chloride of antimony, repeated until bleeding ceases. The gangrenous tissue is completely insensible to both cutting and cauterization.

When the operative measures have been postponed until extensive disorganization of the tissues has occurred, the separation of the eschar is retarded by a local atony, which the author counteracts by means of poultices of meal and tapioca cooked in wine.—*Gaz. Méd. de Paris.*

Accidental Septicæmia.—Experimental septicæmia, the study of which is being pursued with such activity, and regarding which communications have been addressed to most of the European academies and societies, is, unfortunately, not always a question purely scientific and pertaining to the laboratory. In Bordeaux a young surgeon of great promise, Monsieur Marc Girard, a short time since was completing the disarticulation of the humerus of a man who had been severely injured, and presented symptoms of putrid infection, and, while uniting the flaps with sutures, pricked the index finger of his left hand with the needle. A slight inflammation of the finger and inflammation of the lymphatics of the hand followed directly. At the end of several days he had quite recovered and resumed his work, but the symptoms of septicæmia did not fail to declare themselves, and he died fully conscious of the nature of the disease, and, to quote the writer in *Le Bordeaux Médical*, "with the gloomy resignation of the man who knows that all hope is lost."

Preservation of Organic Substances by Means of Fuchsine.—Gelatine putrefies with the greatest facility at a temperature of 25°, forty-eight hours only being required for it to become covered with mould, to liquefy, and undergo complete decomposition. If to a solution of gelatine is added a fifth part of fuchsine, it can be preserved in the open air during an indefinite period. A piece of beef, weighing fifty *grammes*, has been enveloped in blotting-paper moistened with a solution of an hundredth part of fuchsine. This piece of meat has been exposed to the air for several months, and has as yet undergone no alteration.

Urine, to which one-forty-thousandth part of analine violet had been added, was placed in a test-tube in contact with the air, and at the end of six months had undergone no putrefaction.—Lanjerois, *Revue de Therap.*, No. 9.

Enlargement of the Tonsils as a Cause of Nightmare.—In the *Br. Med. Jour.* of June 7, Dr. J. W. Howard relates the case of a girl of thirteen years in whom attacks of nightmare were cured by the removal of enlarged tonsils. The attacks came on generally about an hour after going to bed.

Dr. M. H. Henry, of this city, has been appointed Surgeon-in-Chief of the State Emigrant's Hospital, Ward's Island, N. Y., vice Dr. Carnochan deposed.

THE MEDICAL RECORD:

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

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MEDICAL MEN AS PUBLIC ADVISERS.

As one of the signs of the times, we call the attention of our readers to the meetings of the Albany County Medical Society, which were recently held for the purpose of discussing the propriety of supplying the capital of the State with drinking-water from the Hudson River. It is not our intention to give the reasons *pro* and *con* which were offered by the different medical gentlemen who spoke on the occasions, as the facts which were brought out are well enough understood, and are in keeping with the views of authorities on sanitary matters. The meeting in question was a peculiar one, in that it was held at the instance of the Common Council of the city, for the very purpose of obtaining the views of the medical community upon a subject of the greatest possible moment to the citizens at large. This action on the part of the aldermen not only gives evidence of their wisdom in seeking advice from those best able to give it, but proves as much as any one action can, that the profession of a city can be made useful in times of emergency—in times when every other consideration must give way to the general good.

We are gratified to know that the first meeting was held immediately after the call, was largely attended, and that the subject was very satisfactorily and very thoroughly discussed. We are prepared to believe that the remarks made at those meetings will have their due weight, not only with the board of aldermen, but with the citizens generally, and will relieve those directly charged with acting in the matter from all responsibility.

We can see no good reason why this same course cannot be taken by other municipal authorities in matters of equal importance to the health and welfare of the public. If this were the case, the profession as a body, represented as it is in our medical societies, would feel a responsibility towards the community which they do not now feel when they leave all matters entirely to a Board of Health.

The truth is, however, that two things are wanting to meet reasonable expectations: first, that the profession be asked for an opinion; and second, that they should feel a sufficient amount of responsibility to accede to a request when such a request should be made. The first obstacle is certainly at first sight a very serious one, but if we look at it in the right spirit we shall easily see that it can be surmounted. We need never expect, so long as we, as a profession, hold ourselves in the background, so long as we throw ourselves upon so-called professional dignity, so long as we refrain from making our power and our influence felt, that our advice will be courted or our opinions respected. If our opinions are not asked, we have, after all, no one but ourselves to blame. There is, perhaps, no profession numbering so many capable, educated, nay scholarly men, who have so little influence as a body with the community at large. The legal profession, with no more aggregate talent, take the lead in the discussion of all general and political questions; the clerical profession not only indoctrinate their hearers with their peculiar views, but preach to the unseen audiences whose only teachers are the daily papers. Each of these professions has its respective share in creating public opinion on subjects upon which they are supposed to be well informed. With our own profession, however, by a mistaken interpretation of our Code of Ethics, we are unwilling to do not only what we have a right to do, but what the community have long expected of us. The public are willing to listen to us on medical topics, if we choose to speak, and, having spoken, we can really create public opinion—the power behind the throne.

As a matter of right, no question of great medical importance should be considered settled by any health authority until the profession, as a body, had passed judgment thereon. If such questions are not referred to them by courtesy, as was done in Albany, we should have enough of power and influence in ourselves to compel such a reference. We believe, however, that the profession are waking up to their true responsibilities, not only as teachers and advisers on all matters connected with sanitary affairs, but as leaders in medical opinion for the public. It will, doubtless, take a long while before all the barriers of old prejudices are sufficiently broken down to enable us to realize our hopes, but we are sanguine enough to believe that the time is not far distant when our own profession will have as much to say upon State medicine as the lawyer upon general politics or the clergyman upon public morals.

BELLEVUE HOSPITAL, NEW YORK.

We are pleased to learn that, notwithstanding the threats by certain parties, Bellevue Hospital is to remain in its present site. The committee of the medical staff, to whose favorable report we have before called attention, prepared the way for the definite action of the committee from the Board of Aldermen, who believe, as does every unprejudiced medical man, that the interests of the community, of science and clinical teaching, demand that no change of location be made. Now let the Commissioners of Charities bestir themselves, and make such improvements in the present buildings as shall make the great charity a model of its sort. Science is and has been doing everything possible for the patients; now let art add its benefits.

Reviews and Notices of Books.

DISEASES OF THE RECTUM; THEIR DIAGNOSIS AND TREATMENT. By WILLIAM ALLINGHAM. Second edition, revised and enlarged.

The second edition of the above work forms a compact volume of about 250 pages, containing many valuable suggestions to the specialist as well as to the general practitioner. Among the various works on diseases of the rectum which have appeared during the last decennium, the above deserves special commendation on account of its eminently practical character; and we must congratulate its author on the perseverance which has enabled him to acquire so extensive an experience in this branch of surgery. Although the book is not a complete treatise, it shows manifold evidences of the thorough acquaintance of its author with his subject and of his diagnostic skill and surgical talent, as it embodies a review of four thousand cases of rectal disease which have been observed and treated among the out-patients of St. Mark's Hospital. In seventeen chapters the principal diseases have been discussed, to which have been added a chapter on rodent or "lupoid ulcer," remarks on neuralgia of the rectum and removal of the coccyx, and reports of two cases of villous tumor, and three cases each of gonorrhœa of the rectum and vicarious menstruation from the rectum. The book is burdened with but few reports of cases, the author having summarized his experience in a clear and concise manner.

Throughout the work great stress is laid on the importance of recognition of concomitant disease in contiguous parts, as the bladder and uterus, of derangements in the abdominal and thoracic viscera, and on the influence of hereditary disposition. In the chapter on fistula, the obstacles which are so apt to embarrass the surgeon in accomplishing a cure are very fully discussed, particularly the treatment to be adopted in the case of coexistence of several sinuses, overlapping of the edges, etc. Mr. A. dwells upon the necessity of incising *every* sinus, instead of relying upon the incision of only the principal one. The method of operation is identical with that of Esmarch: a director is introduced into the sinus and brought out at the anus; the tissues are then divided. In those cases where the rectal sinus runs high up, and this method cannot be followed, Mr. A. employs an instrument combining in itself "a spring-scissors and special director." The screw-tourniquet and ligature have also been employed successfully in these cases. Concerning injections, the author has had thirteen successful cases and nearly twice that number in which "I have failed to effect a cure after a prolonged attempt, so that I cannot say that the prospect is very encouraging." In regard to the much-disputed question of the propriety of operating for fistula in phthisical patients, he finds "that we have few clinical facts tending to show that the operation renders the lung-affection worse, or makes it more rapidly progressive," provided the operation be undertaken at an early stage, and during the mild season of the year. Several cases, some of them very unfavorable, are adduced to prove that no aggravation of the pulmonary affection followed operative interference. The surgeon is, however, cautioned to interfere as little as possible with the sphincter-muscles, to guard against the probability of subsequent incontinence.

Internal hæmorrhoids are divided into three varieties: 1st, *the capillary;* 2d, *the arterial-internal;* and 3d, *the venous-internal hæmorrhoid.* It is the first variety only which is "benefited by the application of caustics, though not always cured," and the author restricts cauterization to this form. Besides nitric acid, strong carbolic acid and persulphate of iron have been found very advantageous. In *all* cases of the other two varieties, the author invariably proposes operation, the methods for which are very fully described in a separate chapter. Decided preference is given to the ligature, the use of the "clamp and cautery" being confined to slight cases not complicated by superabundant tissue or external hæmorrhoids. Separate chapters treat of the complications and of hæmorrhage after operation, with description of a very practical method for plugging the rectum by means of a bell-shaped sponge and cotton.

In regard to the treatment of fissure of the rectum, the author, after "having given *forcible dilatation* a fair trial," arrives at the conclusion that incision is the treatment to be preferred, in which opinion he is sustained by the majority of the continental surgeons. The too indiscriminate practice hitherto followed, of dilatation, with the introduction of the whole hand for the purpose of exploration, has frequently been followed by permanent paresis of the sphincter. In connection with the difficulty of diagnosis, in some cases of stricture and malignant disease high up, Mr. A. states that he has, in a few cases, introduced the whole hand—a means which has more recently been advocated and practised by Simon, of Heidelberg. For visual examination, the author prefers, for general use, the ordinary fenestrated metal or the long glass tubular speculum to any other modification, no mention being made of the practicability of Sims's speculum.

In regard to ulceration and stricture of the rectum, the author believes that those cases attributable to constitutional syphilis are very amenable to treatment. When stricture and ulceration are complicated by fistula or sloughing of the tissues, the operation of colotomy is strongly recommended to be performed at an early period, inasmuch as, except in case of malignant disease, it is "not merely palliative but curative," the rectum returning to a healthy condition.

In the treatment of procidentia recti, the author highly extols cauterization with the acid nitrate of mercury and carbolic acid, also the plastic operation of bringing together the mucous membrane after the excision of triangular or elliptical folds with sutures of horse-hair or carbolized catgut. In regard to cancer, the early performance of colotomy is recommended as greatly ameliorating the patient's suffering, if not retarding the progress of the disease. The author has performed

the operation sixteen times, and gives a very full description of his method of operating.

An excellent description is given of rodent or "lupoid" ulcer of the rectum, of which the author has had six cases, in the treatment of which early excision or cauterization is recommended.

OPHTHALMIC CONTRIBUTIONS. I. DERMOID TUMOR OF THE CORNEA. II. AN ADDITIONAL METHOD FOR THE DETERMINATION OF ASTIGMATISM. III. CYST OF THE IRIS, REMOVED BY OPERATION. By GEORGE STRAWBRIDGE, M.D., Lecturer on Diseases of the Eye and Ear in the University of Pennsylvania; Ophthalmic Surgeon to the Presbyterian Hospital in Philadelphia; Attending Surgeon to the Eye and Ear Infirmary of the Philadelphia Dispensary. Lindsay & Blakiston. 1873. 8vo, 26 pp.

THE above articles, having originally appeared in several journals and transactions of Societies, are now combined and reprinted in a form which renders them more convenient for reference. The résumé of the pathology and literature of the two cases reported is very complete. The cyst of the iris makes the thirty-third case thus far recorded. Dr. Strawbridge's method for the determination of astigmatism is an adaptation of an optometric process proposed by Helmholtz, and is useful, not only for that purpose, but also for controlling the results obtained by other methods.

FIRST ANNUAL REPORT OF THE SUPERVISING SURGEON OF THE MARINE HOSPITAL SERVICE OF THE UNITED STATES for the year 1872. Washington: Government Printing-Office. 1872.

THIS book of about one hundred pages, the work of Surgeon John M. Woodworth, comprises a historical sketch of the service from its organization in 1798 to the present time, condensed histories of surgical cases reported in detail to the Department to the number of upwards of four hundred, by surgeons in charge of hospitals devoted, wholly or in part, to the care of seamen, and the tables of receipts, expenditures, etc., appropriate to such reports. The present number of any particular class of cases being too small to warrant classification, Dr. Woodworth does a good work in publishing them in this manner, and making them thus a permanent nucleus for further facts from the same sources. The influence of the Army Medical Museum and the reports from the Surgeon-General's office, is, we think, traceable in this, and we are somewhat surprised that the Bureau of Medicine and Surgery, with its skilled observers and numerous and well-kept medical descriptive lists, has not responded in some such way as this to the same influence.

According to the lists, ten hospitals were in operation at the date of the report, all, excepting the ones at Portland, Boston, Mobile, and Key West, being upon inland waters. The total number of seamen treated during the year was 13,156, at a daily average cost of $0.97.6, or a total cost of $396,263.11 (exclusive of building and repairs). 854 of the cases were not treated in hospital, and the total number of days of relief furnished the remainder was 405,814; with an average mortality of 3.94. The amount of hospital money collected from sailors was $323,700.4.

MEDICAL ESSAYS; compiled from Reports to the Bureau of Medicine and Surgery, by MEDICAL OFFICERS IN THE U. S. NAVY. Washington: Government Printing-Office. 1872.

WE are glad that our professional brethren of the Navy have undertaken a work which will not only to them individually credit, but will be one of the most powerful means for advancing the relative position of their corps in the service. Arguments and statements calculated to show the dignity, responsibility, and self-devotion of medical men as a class are too trite to have much weight with legislators or the public, who have little trouble in recalling instances of dignity unappreciated, trust neglected, and eager strife for personal advancement at any cost, and are quite ready to make the whole profession responsible for them.

The production by officers of the medical corps as a class of such series of essays as this book is mainly composed of, will do more, we are sure, to elevate the whole body of naval surgeons in the estimation of "The Line," and secure them immunity from the petty tyrannies of naval routine than any acts which Congress will ever be likely to pass. The papers on Naval Hygiene, by Medical Inspector A. L. Gibson and Surgeon Payne, are by no means limited in application to the naval service, but may be read with quite as much profit by officers of the army and mercantile marine.

The reports by Inspector Shippen on Certain English Hospitals, and of Inspector Browne on the Charitable Institutions and Peculiar Diseases of Peru, are exceedingly interesting; and the articles by Surgeon Bloodgood and Passed Assistant-Surgeon Pilcher on Outbreaks of Yellow Fever, of which they had experience, are of scientific merit.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, May 28th, 1873.

DR. ERSKINE MASON, President, in the Chair.

THE POST-MORTEM EFFECTS OF THE ASPIRATOR UPON THE BLADDER.

DR. LOOMIS exhibited the genito-urinary apparatus of an Englishman, æt. 71. The patient had been admitted into Bellevue Hospital, May 20th. He stated at the time of his admission that he had always been a perfectly healthy man up to five years ago, when, after an exposure to wet and cold, he was seized with an attack of retention of urine, which was finally relieved by a warm bath. Up to a short time before his admission, he had been in the habit of relieving himself with a catheter, when seized with retention. Seven days before his admission (May 12th), after a hard day's work on Long Island, he was seized with a chill followed by fever and pain in the side. The fever and pain in the side were soon followed by cough, and he gave a straightforward history of pneumonia. The second day of his illness, he was unable to pass his water, and the physician in attendance was compelled to resort to the catheter. At the time of admission, on the 20th, the patient had not passed urine for twenty-four hours. He was then in a typhoid condition, tongue dry and brown, temperature 99¾° F., pulse 120, skin deeply jaundiced, respiration thirty-six, and muttering delirium. Physical examination revealed pneumonia in third stage over the whole of right lung, also the lower lobe of the opposite lung.

On examining the abdomen, there was a swelling extending from the pubes as high as the umbilicus. An attempt was made to pass the catheter, but failed, and the bladder was aspirated, twenty-two ounces of normal urine being evacuated. The patient felt much

relieved, and seemed to be improved in his condition. The next morning he was much better, the pulse had fallen some, the temperature was 98° F., respiration less frequent, and he coughed and expectorated freely. On the next morning the aspirator was used, and twenty-two ounces of urine withdrawn; on the following evening twenty ounces were evacuated. On the next morning it was used again, and two pints of urine withdrawn, in the evening about twelve ounces; and so the aspirator was used morning and evening up to the day of his death. On the morning of the day of his death, two attempts were made with the aspirator, but no urine followed the introduction of the needle. He was in a state of coma at the time and was evidently dying, and all further attempts were given up.

He died of exhaustion on the third day after his admission into the hospital.

On making the autopsy the interesting point to observe was the effect of the aspirator upon the bladder and peritonæum. The bladder contained about a pint of normal-looking urine. On laying it open opposite a spot of extravasation that was noticed upon the surface of the bladder—partly above and partly below the peritoneal attachment—could be seen points where the needle entered the bladder. There were mere red dots, further than which there was no disturbance of the mucous membrane. The points on the surface of the bladder and peritonæum corresponded to the punctures upon the abdominal walls, and there was a slight sub peritoneal extravasation, but there were no evidences of peritoneal inflammation. Some of the punctures were made above and some below the peritoneal attachment. The middle lobe and left lobes of the prostate were very much enlarged. Just at the junction of the membranous and spongy portions of the urethra were two false passages. Dr. Gouley stated at the autopsy that this was the first case in which the aspirator had been used for enlarged prostate.

The condition of the thoracic viscera was of less interest. The right lung was found in the third stage of pneumonia, as was also the lower lobe of the left lung. There was slight pericardial exudation, which had probably taken place during the last twenty-four or forty-eight hours before death. The heart was slightly enlarged, and the aorta was extensively atheromatous. The liver was slightly increased in size, and a gall-stone was found obstructing more or less completely the gall-duct.

CHOROIDAL SARCOMA.

Dr. Knapp presented a specimen of choroidal sarcoma, sent him by Dr. Williams, of Cincinnati, Ohio. The specimen was removed from a girl twenty-two years of age who, two and a half years previous to the operation, accidentally discovered that she could not see with her right eye. She had no symptoms from the blind eye for two and a half years until, three weeks previous to the operation of enucleation, the organ was attacked with glaucomatous inflammation. The operation was performed by Dr. Williams.

On bisecting the specimen, the growth was seen at the back portion of the globe, close to the entrance of the optic disc, pushing aside and doubling up the retina, and overlapping the nerve. A portion of the retina covered the tumor, and on its attached surface there was an uneven surface where portions of the tumor united with the retina. The tumor itself was the size of a big cherry-stone, and around its base was a little border going over into the adjacent choroid.

The specimen did not present anything extraordinary in its structure. It was nothing more than an ordinary spindle-cell sarcoma. The question of importance was in relation to the mode of propagation of the growth. Dr. Ayers, Dr. Williams's partner, states that the first section of the optic nerve presented a diseased surface, necessitating a section further back to find healthy tissue. On examination by Dr. Knapp, the retina had an infiltration of sarcomatous elements in the shape of round small cells, with large nuclei and distinct nucleoli, while spindle-shaped cells were seen in the outer layers of the retina; while still again some portions of the retina were thickened by an increase of connective tissue in the inner layers of it. The same kind of sarcoma-cells existed in the nerves. It was interesting to know that the sarcoma could go both ways, not only through the optic nerve, but through the retina.

THROMBOSIS OF RIGHT VENTRICLE AND EMBOLISM, WITH THROMBOSIS OF BOTH PULMONARY ARTERIES —SUDDEN DEATH.

Dr. Janeway presented a specimen, of which (being removed from a coroner's case) the history was somewhat imperfect. The patient was a female who had been confined six weeks before in Bellevue, as the result of which she became much exhausted. A week before her death, she being still much exhausted, complaining of stitches in her side, dyspnœa, and having a frequent pulse, she insisted upon being discharged. Her request was granted, much against the wish of the house-physician. The next day, while walking through 26th street, she suddenly fell and expired.

The autopsy was performed at the request of the coroner. Nothing abnormal was found about the uterus or the peritonæum. In the right ventricle, near the apex, were found, embedded in the columnæ carnæ, several recent thrombi. Lying loose in the pulmonary artery was another clot, also both the vessels leading to the right and left lung were completely plugged. Besides that were found numerous recent and some yellow infarctions, and over these a recent pleuritic exudation showing all the stages of slight embolism of the smaller branches of the pulmonary arteries to complete thrombosis of the right ventricle.

BUNION AND VALGUS OF THE GREAT TOE—RESECTION.

Dr. F. H. Hamilton presented to the Society a laboring man, æt. 24, upon whom he had recently operated for valgus of the great toe, and bunion, the deformity having been caused by wearing short and narrow shoes when quite young. He had finally become so completely disabled in both feet that he applied to St. Francis' Hospital for relief. It was the usual deformity, only that the displacement was excessive; the great toes completely underlying the second toes and the great-toe joints, and were covered by large and tender bunions, projecting in such a manner as to prevent his wearing shoes and attending to his ordinary business. The bunion had never suppurated, nor was there any disease of the joints. It was apparent that no adequate and permanent relief could be furnished except by resection—an operation which, so far as Dr. Hamilton knew, had not hitherto been made upon these joints in these cases, except when the joints had become carious or necrosed, or were otherwise diseased. Nevertheless the degree of maiming caused by the deformity in this case seemed to justify surgical interference.

Operation, April 7, 1873.—The right foot, being in the worst condition, was chosen for the first operation. An incision was made upon the inside of the joint so as to avoid the flexors and extensors, and resection of about three-quarters of an inch of the distal end of the metatarsal bone was made with the bone-cutter—the

instrument used for this purpose being the large bone-cutter invented by Dr. Hamilton, and described in his "Treatise upon Surgery." No vessels required the ligature. The wound was left open, and the foot was submerged in a bath of tepid water, where it was retained most of the time for two weeks. Whenever it was removed from the bath, cloths saturated with water were applied as a dressing. No attempt was made to bring the toe into position, but as the wound healed it gradually fell into line with the metatarsal bone, and now, the wound being entirely closed, there remains no deformity, except that the toe is shortened about half an inch. Flexion and extension are perfect, and he walks with ease and comfort. The left foot not having been operated upon, the members of the Society were able to compare the two and to note the great improvement resulting from the operation. Dr. Hamilton proposes to operate upon the left foot in a few days.

Dr. H. called attention to the manner of displacement of the great toe in this case, and which he supposes to be typical of what occurs in all similar cases. The great toe was not simply tilted outwards, "opening the joint," as Mr. Bigg says it is in valgus of the great toe, but the proximal end of the first phalanx was slid around upon the distal end of the metatarsal bone, constituting a partial outward luxation, the phalanx articulating only with the outer margin of the metatarsal bone.

Dr. Hamilton desired to call attention, also, to the bath used in the treatment of the wound made by the operation, and which is used in nearly all the cases of recent injuries at St. Francis' Hospital. When Dr. H. took the place of consulting surgeon to this hospital he found Dr. Rose, the very intelligent visiting surgeon in charge, using these baths, and they have continued to be used with the happiest results. When employed a certain degree of œdema generally ensues, but this quickly subsides when the limb is removed and simple dressings substituted. Under their use pyæmia, erysipelas and gangrene are exceedingly rare, indeed almost unknown.

RESECTION AT HIP-JOINT.

Dr. Hamilton also presented the head, neck, and trochanter major of a femur resected at Bellevue Hospital before the class, April 12, 1873. The patient was a boy, æt. seven, who had morbus coxæ in its third stage. He was now progressing favorably toward recovery. The only point of special interest in the case was the fact that, while employing a slight amount of leverage to disarticulate the bone, the femur broke near its middle. He was surprised how little force was requisite to break the femur under these circumstances; and as he had not seen any allusion to this danger in the surgical treatises, he thought it important that he should call the attention of surgeons to the matter. The fracture was transverse, and under the support of pasteboard splints it united speedily and without deformity.

Dr. Sayre said this accident had happened in two cases while he was operating, and he called the attention of the President, Dr. Mason, to one case in which he was present and assisting when it occurred.

MORBUS COXARIUS.

Dr. Sayre exhibited several specimens. The first was the head, neck, and trochanter major of the femur exsected Jan. 26th, 1873. The patient was a boy who was injured in the summer of 1872, and as the result suffered from what was thought to be knee-joint disease. He was confined in the horizontal position, with Buck's extension for several months. Finally an abscess appeared on the upper portion of the thigh, discharged copiously, when it was discovered that there was a disease of the hip-joint. Dr. Sayre saw him in Jan., but in consequence of his exhausted condition did not deem it advisable to perform exsection, especially as he was supposed to have amyloid degeneration of the kidney. Improving somewhat in his general condition, but suffering greatly from pain, it was determined to give him a chance, slim as it might be, of relief. At the operation it was found impossible to luxate the head of the femur in the usual way, in consequence of the immense increase of the size of the diseased parts. It was necessary to saw off the bone below the trochanter major before it could be removed from the acetabulum. The circumference of the diseased parts was an inch and a half larger than normal. The acetabulum was found perforated. Before completing the operation it was necessary to push up the lower portion of the femur, which was found uncovered with periosteum, and saw it off. The lad was then placed in wire breeches. Everything progressed favorably, the wound healing by first intention, except at the lower portion kept open for the discharges, until a fortnight afterwards, when the knee of the affected limb became swollen, giving exit to an enormous amount of pus. Passing the finger into the abscess, the lower portion of the femur was found naked and carious. The patient died at the end of three weeks with amyloid degeneration, and on examination of the femur after death, only its lower portion was the seat of necrosis, although the whole bone was the seat of hypertrophy. In Dr. Sayre's opinion, this was another case in which the disease originated in a laceration of the periosteum covering the linea aspera of the femur, and that the disease extended from that point to the hip, ending in the condition already described.

A second specimen by Dr. Sayre was one removed by operation from a medical gentleman aged 42, who had had disease of the hip-joint when three years old, the result of a fall. Prolonged suppuration ensued, with an occasional discharge of a piece of dead bone until he was nineteen years of age, when he recovered with a limb anchylosed, abducted, and flexed against and over the opposite thigh, so that the foot was eight and a half inches from the ground. It was thought that the limb was fixed by bony anchylosis. This gentleman studied medicine and became one of the principal surgeons in Michigan. In March last he had a little accident in his wagon, whereby a fresh inflammation was started in the affected hip, and he grew worse all summer. Dr. James R. Wood saw the case and opened a large abscess. Dr. Sayre was called in consultation and advised an exploratory operation. The operation was performed. The trochanter major was healthy, except the posterior surface, which had a deep abscess ploughing through it. The head was naked, rough, and carious, and pressed against a hole in the acetabulum. The patient recovered entirely from the operation, is able to walk exceedingly well on crutches, with only three and a quarter inches shortening.

Dr. Sayre exhibited a third specimen, removed also by operation. The patient was a boy four years of age, who contracted disease of the hip when twenty-three months old by a fall from a wagon. He was treated with a plaster of Paris apparatus for two years and nine months, the limb being kept in a straight position. The joint was kept perfectly quiet, but numerous abscesses formed, attended with excessive suppuration. Dr. Sayre was called in consultation by the

Drs. Sabine, and detected disease of the hip-joint still existing. In this case the head and neck of the femur were entirely destroyed, and the shaft perforated the acetabulum and projected above the pubes. Dr. Sayre was of the opinion that this condition of things was the result of the limb being kept in the straight position without an opportunity for extension and counter-extension, the muscles being left free to exert their powerful contractile force in the direction of the long axis of the limb. The diseased end of the bone was removed, as well as fragments of diseased acetabulum.

A fourth specimen was one removed that day from a child aged four years, who also contracted hip disease as the result of a fall. The disease passed rapidly to the third stage, and two years ago Dr. S. opened a large abscess in the neighborhood of the hip. At the operation the head and neck of the bone were found to be destroyed, and section was made above the trochanter minor. There was but a small opening in the acetabulum. An abscess extending down the outer side of the thigh a distance of four or five inches below the hip, the incision was prolonged to that extent. Dr. Sayre stated that this made his forty-seventh case of exsection of the hip.

The Society then went into executive session.

Stated Meeting, June 11, 1873.

Dr. E. Mason, President, in the Chair.

PERITONITIS OF LEFT SIDE FROM PERFORATION OF APPENDIX VERMIFORMIS.

Dr. Loomis, in presenting a specimen, remarked: On the twenty-seventh of last month I saw for the first time a gentleman from whom this specimen was obtained. He was of temperate habits, twenty-four years of age, of fine physique, and had always been a very active man in business. The evening before I saw him, after a pretty hard day's work, and coming home fatigued, he ate freely of lobster salad and went to bed soon after. During the night he was seized with pain in the abdomen, accompanied with diarrhœa. These symptoms kept him awake throughout the night, and in the morning he sent for me.

He stated that he had had two severe attacks of illness, one twelve years prior to the present one, and another seven years before. The first attack occurred in Naples, and was pronounced by the physicians there to be some affection of the bowels, the nature of which the patient did not understand. The symptoms were similar to the present attack. He was confined to his bed six weeks at that time, and it was nearly three months before he could resume his occupation. Seven years ago, while in Paris, he had an attack of what was termed typhoid fever, and was ill for two months.

For a month previous to his last illness he had not been as well as usual. He had diarrhœa alternating with constipation; but as he was not inconvenienced thereby he did not regard it as serious. Four days previous to his last illness, being an officer of the Seventh Regiment, N. Y., he drilled his men four hours without fatigue.

I found him with a pulse of 80, full and soft, with normal temperature, and with slightly flushed face. His abdomen was soft, but not tympanitic, and there was but one point of tenderness, on firm pressure of the abdomen, midway between the umbilicus and crest of the ilium on left side. When pressing firmly over the point the pain occasioned was not severe, but was sufficient to make him ask me to stop. He was walking about the room at the time, and I was inclined to look upon it as a simple case of indigestion, and accordingly advised him to take some castor-oil and laudanum, and if not better in the morning to send for me.

The next morning, the diarrhœa and pain continuing, I was requested to see him again. I found him dressed and lying on the lounge. His general condition had changed very little since my previous visit; his pulse was still below 80, but it had a firmness which I had not noticed at the previous visit. His abdomen was still soft, and the pain was the same as at previous visit. He had no nausea, but said that he had a constant desire to go to stool, and that he had noticed a streak of blood in his passages. His temperature was normal and his skin was moist. His tongue, however, was heavily coated, more heavily than I had noticed for a good while. I suspected peritonitis, although I threw out the possibility of its existence on account of the localized pain on the left side as its starting-point. If it had been the right side I should have thought of perforation of the appendix vermiformis as the cause. Again, I could hardly conceive of peritonitis developing without more constitutional disturbance and without more disturbance before the commencement of the illness. There was no point where I could detect dulness over the abdomen, and the seat of pain was examined with especial reference to this point. I thought it better to be on the safe side, however, and ordered him to bed, a poultice to be placed over the abdomen, and full doses of opium to be repeated as often as necessary to keep him free from pain. I saw him in the evening. The pain was relieved, and he allowed firm pressure over the abdomen. There was then no tympanitis. He felt so well that he asked me what I would allow him to eat. The thirst of the morning had disappeared, and he proposed the next day to go down to his business. I ordered him to keep quiet, but not to take the opiate unless he had pain. He slept all night without taking opium.

The following morning, when I visited him, he seemed a little more restless than the night before. His pulse was 90, and firmer in character, the tenderness was greater and more diffuse. His skin was a little dry and he complained of thirst; and there was a slight tympanitis at the lower portion of the bowels. I was pretty well satisfied from the character of the pulse, it being of that peculiar firm character of peritoneal inflammation, and the fact that abdominal respiration was altogether suspended, that he had localized peritonitis; and I immediately commenced the opium plan of treatment, ordering enough opium to keep the respiration at eighteen and insure freedom from pain; and from that time until his death he had no suffering. At no time did he have vomiting, neither did he assume the position of peritoneal patients, being able to turn from side to side with ease. He complained once or twice of difficulty in passing water, but the catheter was not used at any time. On the third day the abdomen became very tympanitic; the pulse was rapid, small, and thready; his respiration was quick and thoracic, and he died June 1, after four days' illness.

A post-mortem examination was granted to enable me to ascertain the cause of the peritonitis, and was made by Dr. Drake, thirty-six hours after death, the body being kept on ice. The abdomen alone was examined. It was not as tympanitic as at the time of death, for the reason that the undertaker had resorted to pressure to reduce the circumference of the body. On laying open the abdominal cavity the visceral portion of the peritoneum was found injected and roughened by fibrinous deposits over its whole surface. The omentum was very large, and adherent to the left iliac fossa. It was found that the edge of the omentum on

the left side had formed the portion of the wall of an abscess, and that the cæcum and portion of the ileum was carried across the abdomen to the left side, and was bound down on the left iliac fossa. In the fossa was an abscess containing about eight ounces of somewhat offensive and dark-colored pus. The walls of the abscess were formed by the omentum, cæcum, bladder, rectum, and abdominal wall. In the abscess was the vermiform appendix, which was elongated, distended, and perforated. The walls of this abscess were thick and pigmented, and the edges of the opening in the appendix were gangrenous.

In conclusion, Dr. L. referred to the interesting point in the diagnosis of the case.

Dr. O'Sullivan in this connection referred to a case of supposed perforation of the appendix, terminating in fatal peritonitis. It was to be regretted that no autopsy was allowed to verify the diagnosis.

INTRAOCULAR HEMORRHAGE.

Dr. Knapp presented a specimen of intraocular hemorrhage, removed by operation from a man aged 45, who became suddenly blind in one eye. On examination with the ophthalmoscope, Dr. Knapp diagnosticated intraocular hemorrhage. A different opinion of the case was formed, however, by Drs. Noyes and Althof, who likewise saw the patient, and so firm were these gentlemen in their belief of the existence of a melosarcoma that Dr. K. extirpated the eye. On bisecting the organ the vitreous humor was the seat of an extensive hemorrhage, and no tumor was found. The specimen was not only interesting, in a clinical point of view, in showing the importance of accurate diagnosis in such cases, but in a pathological aspect was still more interesting as proving the formation of amyloid bodies in the lesion, in such quantity as to constitute a disease by itself—a condition of things never before recorded. The source of the hemorrhage was not ascertained.

RENAL HEMORRHAGE.

Dr. Hall exhibited a specimen of renal hemorrhage, with the following history, from Dr. McBride:—

David A. W., aged 27, admitted to Charity Hospital March 19. Feb. 13, '73, was attacked with pain in lumbar region, extending to abdomen, and attended with constipation, vomiting, loss of appetite, etc. On admission patient was much emaciated, and there was a marked aggravation of the symptoms described, in addition to which was muscular pains and swelling of the wrist and ankle joints. Urine contained a large amount of albumen with granular casts. Death occurred April 21.

Autopsy, 24 hours after death. There was catarrhal pneumonia of first stage, upper lobe left lung, and considerable fluid in pleural cavity of that side. The heart was normal; liver slightly decreased in size; spleen small and firm. Follicles of intestine enlarged, but no ulcerations were found.

On removing the viscera the left side of the abdominal cavity was occupied by a large dark tumor behind the peritoneum and extending from the diaphragm above to within a few inches of Poupart's ligament below. It presented the appearance as if an abdominal aneurism had burst, and in consequence of a suspicion in that direction the aorta was opened. It was found healthy. The venæ cavæ, vena porta were also examined and found normal. On removing the mass, which proved to be an immense clot, the kidney was found in its centre. The source of the hemorrhage seemed to be on the parenchyma of the organ, in which was a blood-cyst, which had ruptured. The kidney itself was in an advanced stage of fatty degeneration. The clot was quite soft, presented no appearance of lamination, and was effused in different places between the capsule and cortex of the organ. No secondary deposits were found in any other part of the body.

The Society went into executive session.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 4, 1873, to July 18, 1873.

Peters, D. C., Surgeon.—Granted leave of absence for 30 days, with permission to apply at Headquarters Division of the South for an extension of 30 days. S. O. 106, Department of the Gulf, July 1, 1873.—Retransferred from Department of the Gulf to that of the South, and on expiration of his present leave to report in person for orders to Headquarters Department of the South. S. O. 36, Division of the South, July 4, 1873.

Greenleaf, Chas. R., Assistant Surgeon.—Granted leave of absence for 3 months. S. O. 137, A. G. O., July 9, 1873.

Woodhull, Alfred A., Assistant Surgeon.—To report in person to the Commanding General, Department of the South, for assignment to duty. S. O. 143, A. G. O., July 15, 1873.

Brooke, Jno., Assistant Surgeon.—To repair temporarily to Portland, Oreg., and report to the Attending Surgeon for medical treatment. S. O. 78, Department of the Columbia, June 24, 1873.

Smart, Chas., Assistant Surgeon.—When relieved by Assistant Surgeon Meacham to report in person to the Commanding General, Department of the Platte, for assignment to duty. S. O. 143, c. s., A. G. O.

Phillips, H. J., Assistant Surgeon.—Assigned to duty with troops about to march to the Columbia River. S. O. 76, Department of the Columbia, June 20, 1873.

Miller, Geo. McC., Assistant Surgeon.—Assigned to duty at Camp Grant, Arizona Territory. S. O. 51, Department of Arizona, June 20, 1873.

Lippincott, H., Assistant Surgeon.—When relieved by Assistant Surgeon King, to comply with orders received from War Department. S. O. 125, Department of the South, July 12, 1873.

Koerper, E. A., Assistant Surgeon.—To report to Commanding General, Department of the Lakes, for assignment to duty. S. O. 137, c. s., A. G. O.

Meacham, Frank, Assistant Surgeon.—Assigned to duty at Fort Monroe, Virginia. S. O. 143, c. s., A. G. O.

King, Wm. H., Assistant Surgeon.—Assigned to duty at Atlanta, Ga. S. O. 125, c. s., Department of the South.

ARTICLES IN OUR EXCHANGES.

HYGIENE.

Sanitary condition of the kingdom of Italy. Sigmund. *Deutche Vierteljhrs. für offentl. gesundh.*, 1, 1873.

Condition of the public health in England and America. *Ibid.*

General report on sanitary science in Bavaria. MAJER. 1, 1873.

Etiology of typhus fever. *Ibid.*

Canalization of Bremen. HOBRECHT. *Ibid.*

Liernar's system in Stuttgart. REUSS. *Ibid.*

Water supply of Dresden. VARRENTRAPP. *Ibid.*

Review of the statistical report of diseases in Sweden for 1871. WISTRAND. *Hygiea*, April, 1873.

DERMATOLOGY AND SYPHILOGRAPHY.

Gonorrhœa treated by inhalation of ethereal oils. ZEISSL. *Allg. Wien. Med. Zeig.*, 16, 1873.

Variola hæmorrhagica. GOSCHLER. *Ibid.*, 18, 19, 20.

Law for the prophylaxis of syphilis and the regulation of prostitution. SIGMUND. *Ibid.*, 20, 1873.

Quinia in variola and local infection by contact. SCHÜLLER. *Berl. Klin. Woch.*, 19, 1873.

Contributions to the knowledge of small-pox. OBERMEIER. *Virchow's Archiv.*, lvii., 1.

Changes in the sympathetic nerve system in constitutional syphilis. PETROW. *Ibid.*

Unity of variola and varicella. KASSOWITZ. *Jahrb. für Kinderhlk.*, vi., 2, 1873.

Remarks on Dr. Marpother's views as to the nature and treatment of eczema. MYRTLE, A. S. *Med. Press and Cir.*, March 12.

Lichenoid eczema of the face connected with the arthritic diathesis, probably due to lack of innervation of the fifth pair of cranial nerves. LUTHER, F. M. *Ibid.*, March 19.

Cases of congenital syphilis affecting the fingers and toes of children. MORGAN. *Ibid.*

Three cases of a peculiar form of molluscum fibrosum in children. MURRAY, J. *Ibid.*, March 26, & *Br. Med. Jour.*, March 22.

Case of molluscum fibrosum in a woman of 33 years. POLLOCK, G. *Ibid.*

Case of recurrent syphilitic keratitis. DIXON, J. *Br. Med. Jour.*, March 1.

Remarks on psoriasis. MYRTLE, A. S. *Ibid.*

Elephantiasis Græcorum (Lecture I.). LIVELING. *Ibid.*, March 15, 22, 29.

The etiology of psoriasis. SQUIRE, B. *Ibid.*, March 22.

The leprosy of the Bible. WALKER, A. D. *Ibid.*

Two cases of cutaneous lesions consecutive to section of nerves. HAYEM, G. *Archives de Phys. Norm. et Path.*, March.

The employment of pastilles of protoiodide of mercury and chlorate of potash in syphilis. CREQUY. *Gaz. Méd. de Paris*, March 29.

Syphilitic disease of the bones in the newly-born. PARROT. *Le Mouvement Méd.*, March 1.

On the treatment of syphilis. CLERC. *La Tribune Méd.*, March 9.

On the treatment of urticaria. MONTMÉJA. *La France Méd.*, March 12.

Accidents in flap extraction of cataract, and the methods of avoiding them. JACOB, A. H. (Concluded from page 178.) *Med. Press & Cir.*, March 12.

Two cases of destruction of the eye-ball. WILSON. *Ibid.*, March 26.

Tenotomy of the superior rectus. ROBERTSON, A. *Edinburgh Med. Jour.*, March.

The results of linear extraction in the Hôtel Dieu of Lyons, during 1872 (completed). GAYET. *Lyon Méd.*, March 2.

Fibroplastic tumor of the orbit, recurring seven times within twelve years. LETTINEUR. *Gaz. des Hôp.*, March 15.

On a mode of operating by linear extraction without excision of the iris. NOTTA. *Le Bordeaux Med.* Mar., 16.

Case of intraocular hemorrhage; apoplexy of retina from cardiac affections; atheroma of retinal vessels. FIEUZAL. *La Tribune Méd.*, March 9, 23.

On glaucoma. CLOQUET, J. *La France Méd.*, Mar 5.

Case of detachment of the retina. MONTMÉJA. *Ibid.*, March 12.

On the treatment of chalazion. TRELAT. *Ibid.*, March 26.

Acute myringitis. WILLIAMS, A. D. *Cinn. Lancet and Observer*, May.

Diseases of refraction and accommodation. FENNER, C. S. *Rich. & Louisville Med. Jour.*, May.

The basometer for measuring the relative interval of the turning-points of both eyes. SCHROTER. *Klin. Monatbl. für augenhlk.*, February, March, 1873.

Jaesche's operation for entropium and distichiasis. JAESCHE. *Ibid.*, April, May, 1873.

Narrow iridectomy-knife. SCHERK. *Ibid.*

Warm fomentations in eye practice. JAESCHE. *Ibid.*

Serous cysts of the iris. FEUER. *Ibid.*

Epidemic hemeralopia. WEISS. *Berl. Klin. Woch.*, 20, 1873.

Development of traumatic keratitis. BOETTCHER. *Dorpat. Med. Zeitschr.*, iv. i.

Pelvic version. SZONN. *Ibid.*

PRACTICAL MEDICINE AND PATHOLOGY.

Diabetes mellitus. TODINI. *La Sperimentale*, May, 1873.

Nature and treatment of writer's cramp. RUNGE. *Berl. Klin. Woch.*, 21, 1873.

Recurrence and the recurrence form of scarlet fever and measles. TROJANOWSKI. *Dorpat. Med. Zeitschr.*, iii., 3, iv., 1.

On insensible losses (heat, sweat, weight, etc.) during traumatic fever. FREY. *Ibid.*

Post-mortem results in 482 cases examined at the Pathological Institute of Dorpat. CRUSE. *Ibid.* (conclusion).

Senile atrophy of the cranium. METTENHEIMER. *Memorabilien*, xviii., 4.

Concretions in the muscular tissue of the heart. *Ibid.*

Tendency of phthisical persons to taking cold. VON BRUNN. *Ibid.*

Rupture of the spinal cord and veins through hyperflexion of the body. BETZ. *Ibid.*

Sugar fungus in fresh urine. *Ibid.*

Action of cold water on the spleen. MOSLER. *Virchow's Archiv*, lvii., 1.

Epidemic cerebro-spinal meningitis. KOTSONOPULOS. *Ibid.*

Formation of loose cartilages in the joints. WEICHSELBAUM. *Ibid.*

Pachymeningitis hæmorrhagica chronica interna. MOSES. *Jahrb. für Kinderhlk.*, vi., 2, 1873.

Sacculated form of purulent peritonitis mistaken for pleuritic effusion. *Med. Curr-Batt*, 11, 1873.

Renal diphtheria. FABER. *Ibid.*, 12, 1873.

Endocarditis ulcerosa with cerebral embolism. LEICHTENSTERN. *Ibid.*, 13, 1873.

Communications on cholera. KUCHENMEISTER. *Allg. Wien. Med. Zeitung*, 16, 17, 18. 1873.

Diagnosis of cholera. HERMANN. *Ibid.*, 16, 18, 1873.

Phonometric examination of the chest and abdomen. BAAS. *Berl. Klin. Woch.*, 17, 1873.

A simplified method of cleansing the stomach. BIEDERT. *Ibid.*

Intracranial echinococci—recovery. WESTPHAL. *Ibid.*, 18, 1873.

Four cases of diabetes mellitus—recovery. SCHMITZ. *Ibid.*, and 19, 1873.

Case of congenital stenosis of the aorta. ERMAN. *Ibid.*, 19, 1873.

Echinococcus of the spleen—recovery. ROSENSTEIN and SENGER. *Ibid.*, 20, 1873.

Case of situs perversus. SECCHI. *Ibid.*

Case of pyelo-thrombosis with puriform degeneration of the thrombus. ROSSBACH. *Ibid.*, 21, 1873.

Fibrous tumors of the vesico-vaginal septum. PORRO. *Bull. del Scien. Med.*, March, 1873

Medical thermometry. CHERNOVITZ. *Gaz. Med. da Bahia.*

Electricity in acute articular rheumatism. *Ibid.*

Epidemic catarrh in the medical district of Grong in 1872. KAWIN. *Norsk Mag. for Lacg.*, May, 1873.

SURGERY.

Sayre's treatment of fractured clavicle. SEYMOUR, F. *Cincinnati Lancet and Observer*, May.

Bloody, watery, or other discharges from the ears, nose, or mouth, as signs of fracture of the base of the skull. HODGES, R. M. *Boston Med. & Surg. Jour.*, May 15.

Amputation at the thigh for a medullary sarcoma of the leg simulating aneurism; recovery. BRIGHAM, CHAS. B. *Western Lancet*, April.

Case of fractured ribs, emphysema and pneumothorax, paracentesis thoracis. MACKELCAN, G. L. *Canada Med. Record*, May.

On pelvic necrosis. ALLEN, H. *Phila. Med. Times*, May, 17.

Case of compound comminuted fracture of the skull, with extensive loss of bony tissue, with recovery. BOUGHTER, J. F. May 17.

Goitre. GROSS, S. D. *Phila. Med. Times*, May 17.

Case of lacerated wound of abdomen. NORRED, CHAS. H. *Med. Examiner*, May 15.

Pistol-shot wound of the brain. BOGUE, HENRY. *Canada Lancet*, May.

Excision of knee-joint. Thrombosis. *Virg. Clin. Record*, May.

Ligation of femoral artery for large aneurism of the popliteal artery. MEARS, J. E. *Phila. Med. Times.* May 10.

Case of extensive varicose veins. NELSON, D. T. *Med. Examiner*, May 1.

Diastasis of the head of the femur and artificial hip-joint. SAYRE, L. A. *Am. Practitioner*, May.

Shortening and bending in fractures of the femur. NICHOLS, J. E. *Chicago Med. Jour.*, May.

Case of dislocation of the femur downwards and forwards into the thyroid foramen. Successful reduction after eight weeks. WAGNER, A. D. *Can. Med and Surg. Jour.*, May.

Case of strangulated femoral hernia. HOWARD. *Ibid.*

Strangulated femoral hernia. RODDICK, T. G. *Ibid.*

Decision in a suit of malpractice. *Buffalo Med. and Surg. Jour.*, April.

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Intra-uterine destruction of polypoid tumors. WALTER. *Dorp. Med. Zeitschr.*, I, 1873.

Two cases of artificial delivery. BETZ. *Memorabilien*, xviii., 4.

Atresia hymenalis. KOTSONOPULOS. *Virchow's Archiv.*, lvii., I.

Intermittent fever and its various forms in childhood. BOHN. *Jahrb. für Kinderhlk.*, vi., 2, 1873.

Infantile paralysis. KÉTLI. *Ibid.*

Two cases of erysipelas in children. THOMAS. *Ibid.*

Surgical notes from the Children's Hospital in Pesth. VEREBÉLY. *Ibid.*

Treatment of cholera infantum. WERTHEIMBER. *Ibid.*

Case of stramenium poisoning. WITTMANN. *Ibid.*

Iodine in croup. BOEHM. *Allg. Med. Central-Ztg.*, 43, 1873.

Artificial delivery. SPIEGELBERG. *Ibid.*, 36, 1873.

Uterine tumor complicating birth. Death without delivery. NEUSCHLER. *Med. Corr-Blatt.*, 15, 1873.

ANATOMY AND PHYSIOLOGY.

Extraordinary anomalies in the arterial supply of the upper extremities. HILLARY, M. *Canada Lancet*, May.

Classification of objects of nature and their distinctive characters—an introduction to the study of physiology. TYSON, JAMES. *Dental Times*, April.

Re-implating teeth. HAMPTON, R. I. *Ibid.*

Transfusion of water in the capillaries under blood-pressure. KÖRNER. *Allg. Wien Med. Ztg.*, 17, 19, 20, 1873.

Mechanism of the semi-lunar valves of the heart. GERADINI. *Lo Sperimentale*, May, 1873.

Functions of the nerves and muscles of the larynx. SCHECH. *Berl. Klin. Woch.*, 20, 1873.

Relation between nerve and muscle. FERGAST. *Archiv fur Micr. Anat.*, ix., 1.

Development and structure of elastic tissue in reticular cartilage. HERTWIG. *Ibid.*

Method of examining the central nerve-system of man. BETZ. *Ibid.*

Contribution to our knowledge of vibriones. GRIMM. *Ibid.*

A method of embedding. FLEMMING. *Ibid.*

A microscope by R. Winkel in Gottingen. MERKEL. *Ibid.*

Termination of nerves in the sensitive hairs of mammals. SCHÖBL. *Ibid.*, ix. 2.

Nerves of the cornea. HOYER. *Ibid.*

Ranvier's tendon corpuscles. GRUENHAGEN. *Ibid.*

Musculature of the iris. *Ibid.*

Striated muscle. MERKEL. *Ibid.*

Anatomy of the nervous system. KEY & RETZIUS. *Ibid.*

Relation between gland-nerves and gland-cells. KUPFFER. *Ibid.*

Theory of the microscope and microscopical observation. ABBE. *Ibid.*, ix., 2.

A new illuminating apparatus for the microscope. *Ibid.*

Termination of nerves in striated muscle. ARNDT. *Ibid.*

Glands of the pelvis of the kidney. EGLI. *Ibid.*

Cases of unilateral injury of the spinal cord. RIEGEL. *Berl. Klin. Woch.*, 18, 1873.

Case of mental disturbance in acute Bright's disease. *Ibid.*, 20, 1873.

MATERIA MEDICA AND TOXICOLOGY.

Solutio carnis, a new dietetic and therapeutic agent in affections of the stomach. LEUBE. *Berl. Klin. Woch.*, 17, 19, 1873.

On the antirheumatic and curative action of Propylamine. NAMIAS. *Giorn. ven. di Scien. Med.*, April, 1873.

Use of the Ethiops mineral. MURINO. *Lo Sperimentale*, May, 1873.

Petroleum in whooping-cough. WEISS. *Berl. Klin. Woch.*, 20, 1873.

Influence of digitaline on the blood-pressure of mammals. BOEHM. *Dorp. Med. Zeitschr.*, iv., 1.

Poisons and their treatment (MOSES MAIMONIDES, 1198). Trans. by STEINSCHNEIDER.

Case of belladonna-poisoning. BAUER. *Med. Corr-Blatt*, 15, 1873.

The antiphlogistic or the restorative treatment, or both. MONTGOMERY, E. *Med. Archives*, May.

Therapeutics of the larynx. HOLCOMBE, W. H. *U. S. Med. and Surg. Jour.*, April.

Excretion of iodine and bromine by the mammary glands. LOUGHLIN, J. E. *Phila. Med. Times*, May 10.

Hypodermic use of ergotine. CURTIS, F. C. *Am. Practitioner*, May.

Dental pathology and therapeutics. FLAGG, J. F. *Dental Cosmos*, May.

Electricity as a therapeutic agent. FRION, G. W. *Buffalo Med. and Surg. Jour.*, April.

Notes on veratrum viride. ADOLPHUS, JOS. *Med. Archives*, May.

Household remedies. CARSTENS, J. H. *Detroit Review of Med. and Pharmacy*, May.

Norwood's tinct. verat. viride. MARSH, MADISON. *Med. and Surg. Report*, May 10.

Medical Items and News.

University of Michigan and Homœopathy.—To answer numerous inquiries, the following preamble and resolutions, passed by the Board of Regents at a late meeting, are published:—

Whereas, The Legislature of the State of Michigan at its last session re-enacted the law of 1855, requiring the appointment of Homœopathic Professors in the Medical Department of the University; and, whereas, it has always been claimed by the Board of Regents that the law was an infringement upon the rights and prerogatives of the Board; and, whereas, the Supreme Court of the State has refused to grant a mandamus requiring the Regents to comply with the law, thereby substantially confirming their action, therefore,

Resolved, That we maintain the position heretofore taken, and decline to make the appointments required by the law.

Resolved further, That we do this in no spirit of factious opposition to the apparent will of the Legislature, but because we believe the true and best interests of the University demand it.

Resolved, That we re-affirm the former action of the Board expressing a willingness to take official charge of an independent school of Homœopathy, and connect it with the university, whenever the means shall be provided for the payment of its professors.

Resurrectionists.—Henry Day, Esq., a prominent member of the New York Bar, writing from Edinburgh, Scotland, to the *New York Observer*, remarks as follows: Many of the plots in the old burying-yards of Edinburgh are covered with a strong iron grating, fastened at the corners into hinges set in masonry, and these gratings are locked with heavy padlocks. Fifty or more years ago, the practice of robbing the graves by the so-called resurrectionists, for the dissecting-room, was carried to such an extent that this device was adopted to protect the graves. Guard-houses were also erected.

Anecdote of Dr. Louis.—The late Professor Louis, of Paris, was, at one time, president of the *Société médicale d'observation*, the members of which were to take complete daily observations of the cases which they were called upon to treat. Their mode of questioning their patients was so strict that M. Ricord was led to make sport of them, and M. Louis especially, by representing the following dialogue to have taken place.

Presupposing that Dr. Louis has been called to attend a stoker on a locomotive, who has been run over by his engine, he commences by asking him,—

Well, my friend, do you have much pain?

Can you cough?

Is this the first time such an accident has happened to you?

Has anything of the kind ever before occurred in your family, etc., etc.

State Medical Society of Virginia.—The officers elected for the ensuing year were: *President*, Dr. Harvey Black; *Vice-Presidents*, Drs. A. S. Payne, H. Latham, R. K. Burgess, J. H. Claiborne, S. Kennerly, and O. Fairfax. The next meeting is to be held on the second Tuesday in November, 1873, at Norfolk.

Hartford Medical Library and Journal Association.—The following is a list of the officers of the Hartford Medical Library and Journal Association: President, Dr. W. A. M. Wainwright; Vice-President, Dr. C. A. Dennison; Corresponding Secretary, Dr. C. A. Hart; Recording Secretary, Dr. J. Campbell; Treasurer, Dr. C. W. Chamberlain; Librarian, Dr. H. P. Atherton; Directors—Executive Committee, Dr. G. B. Hawley, Dr. C. W. Chamberlain, Dr. G. W. Russell, Dr. G. P. Davis, Dr. E. R. Hunt, and Dr. J. Campbell.

A Valuable Prize.—The *Nation* says the Royal Institute of Science, Literature and Arts, in Venice, offers a medal of the value of 3,000 francs, to be awarded in 1874 to the best essay on the following subject: "The advantages derived by the medical sciences, especially physiology and pathology, from modern discoveries in physics and chemistry; with a retrospective view of the systems which prevailed in medicine in past times." The medal is open to foreigners, and the essays may be written in French.

Tea.—Garway, the founder of Garraway's, claimed the merit of being the first to offer tea in leaf and drink for public sale in 1657, earning the patronage of many physicians, noblemen, merchants, etc., by retailing it at from sixteen to fifty shillings a pound, whereas, before he embarked in the trade, it was difficult to get it at the rate of six to ten pounds.

Jeddo School of Medicine, Japan.—Dr. Hilgendorf, Senior Professor of the Polytechnic Institute in Dresden, has accepted the chair of Natural Science in the School of Medicine at Jeddo, Japan. Dr. Cochins, late of the Victoria College in Berlin, has been elected Professor of Physics and Chemistry in the same college.

The Philadelphia Medical Register and Directory.—The publication of this Register, for 1873, is under the supervision of Dr. John H. Packard. It contains 308 pages, and much that is interesting to medical men in that section.

College of Physicians of Philadelphia.—The following officers were elected: for *President*, Dr. George B. Wood; *Vice-President*, Dr. Geo. W. Norris; *Secretary*, Dr. John H. Packard; *Treasurer*, Dr. J. Rodman Paul; *Recorder*, Dr. J. Ewing Mears; *Librarian*, Dr. Robert Bridges; *Censors*, Drs. Isaac Hays, Joseph Carson, Lewis Rodman, Edward Hartshorne; *Councillors* (for three years), Drs. W. S. W. Ruschenberger and James H. Hutchinson.

Braun.—Dr. Carl Rudolph Braun, the renowned Professor of Obstetrics and Gynæcology at the University of Vienna, has been raised to Knighthood, with the title of "Fernwald."

Philadelphia County Medical Society.—The following officers were elected for the ensuing year: *President*, Dr. Wm. B. Atkinson; *Vice-Presidents*, Drs. Henry H. Smith and H. St. Clair Ash; *Recording Secretary*, Dr. Henry Leaman; *Asst. Recording Secretary*, Dr. Lemuel J. Deal; *Corresponding Secretary*, Dr. Wm. Goodell; *Treasurer*, Dr. Wm. M. Welch; *Censor*, Dr. N. L. Hatfield.

Rush Medical College, Chicago.—Dr. Walter Hay, of Chicago, Ill., has been appointed Adjunct Professor of Principles and Practice of Medicine in the Western Medical Institution.

Homœopathic Journalism.—The editor of *The American Observer* (Homœopathic) states that of the fifty homœopathic periodicals that have been issued by the American press, only nine are now in existence; and of these, only one has remained under the same general editorial management for the space of nine years. The failures and wrecks are credited to "in-

efficient commanders, poor vessels (springing many a leak), bad canvas, and the loss of charts and compass."

Almost Instantaneous Death of a Physician from Carbolic Acid.—S. D. V. Hill, M.D., of Macon, Miss. (*Rich. and Louisville Med. Journ.*), writes that Dr. R. S. C. Foster, one of the oldest practitioners of his county, left town at nightfall with a friend, having a flask of whiskey in one pocket and a bottle of Calvert's liquid carbolic acid No. 5 in the other. After riding two miles, and being cold, he proposed to take a drink of the whiskey, and took out of his pocket the carbolic acid, withdrew the stopper with his knife, and after offering his friend some, who refused, took about half an ounce before discovering his mistake. He died in ten or fifteen minutes after entering the cabin of a negro. A quantity of mustard and lobelia were given him, but of course it produced no emesis. The poison seemed to produce sudden and fatal sedation of the nerve-centres; he states that he must have died without much suffering. Dr. Hill testifies that Dr. Foster was perfectly sober at the time, and was a man much above mediocrity in intellectual ability. The mistake was made by the two bottles being about the same size and shaped alike.

The Medical Register and Directory of the United States.—Dr. S. W. Butler, of Philadelphia, desires us to say that work on this important publication is resumed with energy, and it will be issued as soon as the vast amount of material can be collected and arranged. The coöperation of medical men in every section of the country is earnestly solicited in replying to circulars, which will be sent out, and in giving brief outlines of the history of medical institutions, hospitals, colleges, etc.

Antimony.—A new source of antimony of excellent quality has been discovered in the Italian Alps, by W. P. Jervis, the director of the Industrial Museum of Turin. This observer has in press a large volume on the "Practical Mineralogy of Italy," containing accurate analyses of the more important minerals.

Peruvian Skulls.—The Anthropological Institute of Great Britain has received a present of 150 specimens of Peruvian skulls from Consul Hutchinson, of Callao, which were dug out of the old aboriginal burying grounds of Pasamaye and of Ancon.

Embryology.—Professor Hyatt, of Cambridge, Mass., by means of sections of the central spirals of Ammonites and Goniatites, has been able to obtain some valuable results on the subject of the Embryology of Fossil Cephalopods.

A Proposed Museum of Distorted Pelves.—The Philadelphia Obstetrical Society, William Goodell, M.D., President, makes an appeal for aid in the formation of a Museum of Distorted Pelves, Obstetrical and Gynæcological Instruments, and earnestly solicits such specimens of contracted Pelves as may be in the possession of members of the medical profession, who may be willing to assist in forming a collection which will allow a wider and more comprehensive survey of this subject. If the original specimen cannot be sent, casts or photographs are solicited. Specimens of Instruments, Pessaries, and special mechanical contrivances are also desired. All objects for the museum may be sent to the secretary of the society, Dr. J. V. Ingham, No. 1342 Spruce street, Philadelphia, who will at once acknowledge their receipt.

Society of the New York Hospital.—The annual report of this society, for 1872, shows that the total receipts were $611,801.12, and the expenditures $596,884.65. The annual expenses of the hospital for ten years prior to its close averaged over $20,000, more than its receipts, as State aid had been discontinued.

Gordenio.—Wm. Gordenio was the first person upon whom the degree of Doctor of Medicine was bestowed. He received it from the college at Osti in 1320.

Tyndall's Receipts in America.—It is said that Professor Tyndall received 23,100 dollars for the course of thirty-five lectures delivered in the United States. After deducting expenses, he handed over 13,000 dollars to a committee, with instructions to spend the money in encouraging and aiding students of science who devote themselves to original investigation.—*Students' Journal and Hosp. Gaz.*

American Medical Association.—The following resolutions, introduced by Dr. Franklin Staples, of Winona, were passed almost unanimously by the Minnesota State Medical Society at its semi-annual meeting held at Mankato, Minn., June 10th.

Resolved, That as physicians we appreciate and acknowledge the importance and value of the *American Medical Association*; that such an organization is indispensable, not only to the government of the profession in the ethical relations of its members, but as an aid to the highest advancement of the science and art of medicine in this country; that it tends to promote these ends by the establishment and maintenance of a national code of ethics, and by furnishing a standard for, being the head and centre of, and giving an impetus to, all our local medical societies.

Resolved, That the history of the American Medical Association for the past few years has developed the fact that important changes in its organization and government are required to secure its perpetuity and highest usefulness.

Resolved, That the following are among the more important reformatory measures needed, viz.: 1st, such a change in the By-Laws of the Association as will keep all ethical questions as far as possible out of the public meetings of the Association, and that, in our opinion, the plan proposed at the last meeting by *Dr. N. S. Davis*, of Chicago, to refer all questions of a personal and ethical character directly to a judicial council for decision, would best accomplish this object; and 2d, a restriction of the membership, so that only permanently organized State and recognized county or district medical societies, and the medical departments of the army and navy, shall be permitted to send delegates to the National Association.

Resolved, That while we admit existing imperfections and are willing to aid in effecting improvements in the organization and working of the American Medical Association, we heartily disapprove any and all manifestations of a spirit of fault-finding among the profession, or in the medical journals of the country, that has not at least a practical suggestion to offer in the way of reform.

Resolved, That we have heard with pleasure the report of our delegation in attendance upon the late meeting of the National Association as presented to us by Dr. A. B. Stuart; that we are gratified with the harmony and good feeling prevalent in that meeting; that, in various actions of the Association, among which was that to reorganize the sections, the vesting of discretionary power in the Committee of Publication in regard to papers which shall appear in the *Transactions*, and the provision for complete stenographic reports of the proceedings of the various sections, we can see evidence of efficient work in the right direction.

Resolved, That the *Minnesota State Medical Society*

hereby pledges itself to labor for the advancement, the improvement, and the perpetuity of the American Medical Association rather than for its destruction.

NEW YORK FREE DISPENSARY FOR SICK CHILDREN.—The Second Annual Report for the year ending March 31, 1873, shows that 4,661 children, chiefly infants, received medical and surgical relief during the two years it has been established; 2,672 were treated in the past year. The beginning of the second year found but $815.61 of funds in bank; its close exhibits $5,397.15, with which to enter upon the third year. *Attending Physicians*, Drs. P. B. Porter, John C. Jay, Jr., H. T. Hanks, David Magie, B. F. Dawson, F. H. Rankin. *Consulting Physicians and Surgeons*, T. G. Thomas, Thos. Addis Emmet, Fordyce Barker, J. B. Reynolds, Willard Parker, J. Marion Sims, T. M. Markoe, J. S. Thebaud, J. Kammerer, J. J. Hull.

ALBANY MEDICAL COLLEGE.—The Circular of this College, Department of Medicine, University of Albany, for 1871–72, exhibits the names of 100 students who attended lectures in 1872, and those of 25 graduates. The college library contains about 5,000 volumes, which are accessible to students. Since its organization in 1839, diplomas have been conferred upon 1,116 graduates.

NEW YORK HOSPITAL AND BLOOMINGDALE ASYLUM.—The annual Report of the Governors of the Society of the New York Hospital for 1872 gives the following particulars: The Hospital Library contains 9,074 volumes, 408 of which have been added during the past year. Two hundred and ninety-nine insane patients were treated in the Bloomingdale Asylum for the Insane, in the same time; of these, 124 were males and 175 females. Recovered, 46; improved, 37; not improved, 25; died, 21. Remaining, Dec. 31, 1872, 170. Since 1821, 6,149 patients have been admitted to the asylum.

ENGLISH MIDWIVES.—The London correspondent of the *Philadelphia Medical Times*, in a recent issue, writes that it is calculated that there are ten thousand midwives practising in Great Britain, and that from 30 to 60 per cent. of the women in many rural places and manufacturing towns are delivered by midwives, many of whom are very ignorant. A great excess of mortality among lying-in women is the result. A deputation of the Parliamentary Committee of the British Medical Association has waited upon the President of the Local Government Board, on the subject of establishing an examining and public register of trained midwives.

CRANIOLOGICAL COLLECTION.—The 150 skulls contributed to the London Anthropological Institute by Consul Hutchinson of Peru, will be presented to the Museum of the Royal College of Surgeons.

OLIVE-OIL TRADE OF NICE.—The olive-tree is planted over an extent of 15,000 acres at Nice, and the average yearly produce is from 180,000 to 200,000 gallons. The analysis of the best oil produced in that district is as follows: carbon, 77.21; hydrogen, 13.36; oxygen, 9.43.

LUNATIC ASYLUMS.—Tennessee is to have two new insane institutions; one in the eastern and the other in the western division of the State.

Dr. Daniel H. Kitchen has been promoted to be second Assistant Physician of the New York State Asylum at Utica, *vice* Dr. Walter Kempster, appointed Superintendent of the Northern Wisconsin Hospital for the Insane. Dr. William S. Whitwell, late of Charity Hospital, has been appointed third Assistant Physician to fill the vacancy.

Dr. W. S. Chipley, formerly Superintendent of the Eastern Lunatic Asylum of Kentucky, has been reappointed to that position, in place of Dr. John Whitney, whose time of service has expired.

DEATH OF DR. TYLER SMITH, OF ENGLAND.—The death of this eminent physician took place from apoplexy, in one of the suburbs of London, on the 22d of June. He was found insensible by the roadside and expired shortly afterwards. For some time he had been suffering from Bright's disease of the kidneys and arterial degeneration, and had recently several attacks of epistaxis and subcutaneous ecchymosis. He was fifty-nine years of age at the time of his death, and for nearly half of that time had been prominently known as an obstetrician both in England and abroad.

VERMONT ASYLUM FOR THE INSANE.—Dr. Joseph Draper, formerly an assistant physician in the Vermont Asylum, and more recently in the New Jersey State Asylum, has been appointed superintendent to fill the vacancy occasioned by the resignation of Dr William H. Rockwell.

BELGIAN INSANE ASYLUMS.—The Belgian Government has recently ordered securely-locked letter-boxes to be placed in all the insane asylums of the country, public or private, in positions where they will be easily accessible to all the inmates. They are designed to allow complaints and suggestions to be made to the authorities in a way independent of any of the officers or attendants. No one connected with the institution can have access to them. They are in charge of the *Procureur du Roi* of the district, and the letters they contain are taken to him weekly for examination. The complaints are then investigated, and if any one claims to be sane, the case is ordered to be examined by medical experts. Abuses are corrected. The system, it is said, exerts a wholesome influence, and tends to secure proper management in all its details.

TREATMENT OF BILIARY CALCULUS BY CHOLEATE OF SODA.—Schiff admits that these calculi are formed of cholesterin, not because this substance is formed in too great abundance, but because the bile does not contain the principles which maintain it in solution. These are the cholates and choleates of soda and potassa, more than the alkalinity of the bile which dissolves the cholesterin. Schiff therefore advises the administration of eight grains of choleate of soda, to be given twice daily, and increased until "saturation" is indicated by irregularity of the pulse, which becomes slow during repose and accelerated by the least effort. The dose may then be diminished, but not entirely suspended—a considerable time, a week at least, being required for the remedy to produce amelioration of the symptoms.—*Imparziale & Gaz. Heb.*

New Publications.

BOOKS RECEIVED.

ON MARIENBAD SPA, etc. By A. V. JAGIELSKI, M.D., (Berlin). London: Trübner & Co. 1873.

PRACTICAL MANUAL OF THE DISEASES OF CHILDREN, WITH A FORMULARY. By EDWARD ELLIS, M.D., Physician to the Victoria Hospital for Sick Children, etc. Second ed. Phila.: Lindsay & Blakiston, 1873.

Original Lectures.

MICROSCOPIC FUNGI.

LECTURE DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS.

By JOHN C. DALTON, M.D.,

PROFESSOR OF PHYSIOLOGY.

[Phonographically reported for the MEDICAL RECORD.]

GENTLEMEN:—I do not expect to be able in this evening's lecture to give you a complete account of all the microscopic fungi, and shall only direct your attention to individual examples of those which are perhaps the most important, or will be of most assistance to you in a physiological point of view. I wish simply to present to you an idea of what fungi are, in what way they grow, and in what way they are related to each other; so that you may better understand the books devoted especially to this subject. Microscopic fungi of all kinds belong to or represent a similar class of vegetation. An ordinary flowering plant presents to the eye externally certain very well-marked parts. Besides a very complicated microscopical structure, it has a root, a stem, branches, twigs, blossoms, and fruit.

In the interior it is composed not only of vegetable cells, but also of cells which have taken on a different formation and become fibres or ducts, marked by a peculiar outline, and tubes occupied by the life-element of all vegetable growths. The internal structure of the flowering plant, accordingly, is an exceedingly complex one, while that of the fungi, the microscopical as of all the flowerless plants, is comparatively simple. If you will notice one of the larger fungi, as the mushroom, for example, you will see that it consists, so far as regards its external configuration, of what may be called a stem, irregular in form, and loosely set upon the ground, and covered with an umbrella-like cap, upon the under surface of which there are radiating laminæ, or folds of soft substance, diverging from the upper part of the stem to the edges of the cap. These folds are the parts of the fungus where the so-called fruit is produced. The mushroom has no root, properly speaking, and its stem is the only part which shows much resemblance to that of a flowering plant. Its umbrella-shaped cap represents the branches, foliage, and fruit all combined.

If you now take a small piece from any part of the mushroom, tear it up with needles, and place it under the microscope, you will find in it nothing but cells. No matter how large the plant may grow, no ducts will be found in it, no tubes, no fibres, no glands,—nothing but cells. Its soft, spongy, semi-solid material is made up of cells alone. Sometimes the cells are seen to have an elongated or cylindrical form, but that is all. There is nothing in them like the compound structure of the higher forms of vegetation. These are the characteristics which are common to all fungi.

It is, however, the microscopic fungi in which we are now particularly interested at present; and by this, of course, we mean those which require the use of the microscope in order to recognize their distinctive characteristics.

Perhaps the most familiar examples of this class are those of the common moulds. All the varieties of moulds, mildew, and smut belong to the same group, and they all go to make up the great division of microscopic fungi. It is these lower forms of vegetation which come into contact with our medical studies, and sometimes rise into considerable pathological importance.

It is a fact which doubtless you all have noticed, that when leather, or anything which is made of leather, is left for some time in a damp and dark place, after a while it will become covered with layers of whitish material like spots or stains, or as if it had been dusted with some white powder. If, however, the material be examined, it will be found to consist of a microscopic fungus. On a close examination, it is seen to be composed of two parts; namely, a vegetative part and a reproductive part; and in this respect this white mould of leather will answer as an example for all the microscopic fungi. The greater part of the white leather-mould is composed of a network of minute interlacing filaments, having the form of tubes; but they are in fact cells, lying in contact for a certain distance and then most frequently bending or curving in various directions, and sometimes branching, each filament frequently sending out a lateral prolongation, which itself divides and thus gives origin to another secondary division. If several of these branching filaments are followed in the field of the microscope, they are seen to produce a network such as is represented here upon the blackboard. These filaments are more or less divided by transverse partitions, and are thus formed of elongated cells, placed end to end. Their substance is very slightly granular, almost always absolutely colorless, and sufficiently transparent to permit us to see distinctly their outlines, even when closely entangled with each other. This network of filaments is what is called the *mycelium* of the fungus, or its vegetative portion. There is no fructification here; nothing but a repetition of elongated cells and filaments. The mycelium will continue to spread almost indefinitely, extending outward from the centre by the continuous growth of branching diverticula, which in their turn produce other elongated cells and filaments. This vegetative part of the fungus, or its mycelium, is not, in general, sufficiently characteristic to indicate any particular species, but is very similar in its appearance in all of the microscopic fungi. Besides its mycelium, however, the fungus has also a *reproductive* part, in which is produced a kind of fruit somewhat analogous to the seed of the higher plants.

In this very mould which appears upon the surface of leather, you will see some of the fibres which are rather larger than the rest, and stand up in a vertical position. They grow in this direction until, after a time, they become expanded at the top into a globular-shaped extremity, and about this are placed radiating, club-shaped cells which adhere to the sides of the globular head. On the extremity of each of these club-shaped cells there grows a very highly refractive body of an ovoid or spherical form; so that we have the whole head covered with a crown or globular mass of club-shaped cells and refractive spherical bodies. These little refractive spherical bodies are the spores of the fungus.

What we mean by a "spore" is this: The flowering plants produce a seed, which is itself formed from the fertilized germ. What we call a seed is therefore really an embryo; and the germ of the flowering plant requires to be fertilized by the pollen before it can become a seed capable of reproduction. Hence we have, in these cases, both a male and a female element; and the germ of the plant needs to be impregnated in order to reproduce its kind, as much as the

ovum of an animal. But it is not so in the case of the fungus; or at least if such be the case, we do not at present know how the process is accomplished.

The fungus, in fact, produces a globular body which, without any special impregnation so far as we know, has the power of reproducing a like fungus, as the fertilized seed of the flowering plant may do; and to this reproductive body the name of spore is given. In this case the spores are produced on the outside of the globular head which crowns the stalk. Great care, however, is necessary in order to show them completely in microscopic examination. The fungus growing in this way upon leather is known by the name of *Aspergillus*, from the appearance of its reproductive part, because it looks something like the nozzle of a watering-pot (aspergillum). The whole group or genus of microscopic fungi which present this peculiar and characteristic form of reproduction all go by the name of aspergillus. This particular species growing upon leather is called the *Aspergillus candidus*, because its reproductive part is colorless, and appears white by reflected light.

There is also a greenish-blue and a black aspergillus, all resembling each other in every particular, excepting the color of the spore-heads. We now see the distinction between the mycelium and the reproductive portions of a fungus.

In the examination of microscopical fungi it is well to recollect that you can hardly ever distinguish them with certainty by their mycelium alone; for the reason that this is often very similar in different species and genera. You will always see in it tubular filaments, more or less divided by transverse partitions, more or less curved and ramifying, more or less transparent and colorless, and more or less granular. The mycelium of the same species, also, will sometimes grow differently according to the variation in surrounding circumstances, such as the degree of light, moisture, temperature, etc., etc.

It is the reproductive part, on the other hand, that marks distinctly the genus and species. When, therefore, you see the reproductive filaments standing upright, each crowned with a globular head surrounded by club-shaped cells bearing spherical spores, you know that the fungus in question belongs to the genus aspergillus, and if the spore-heads are white, it is the "aspergillus candidus."

The spore, when ripe, is discharged from the head of the reproductive filament, and if transported to a favorable locality, immediately begins to germinate, sending out a little tube-like prolongation, which increases in length, divides and ramifies, until after a while there is produced another mycelium, at a distance from the first, by the growth from the germinating spore.

This description will answer for a general sketch of the main features of microscopic fungi.

I next propose to speak of two fungi which are particularly interesting as being connected with the process of decay, or rot in fruits. These two fungi exist and grow as parasites in the decaying fruit. It may perhaps occur to you that fruit is not a living thing, and therefore that it is hardly proper to speak of its fungus as a parasite; but a moment's consideration will convince you that fruit is really alive, since it contains the seed which has the power of germination and growth; so that really the fungus is just as much a parasite, whether living in the fruit, the leaves, or the stem of a plant, or in the tissues of a living animal.

First, then, with regard to the nature of the process of decay, as we commonly see it in fruit. The true nature of this process has not been understood until within a recent period.

It was formerly supposed to be a kind of continuation or exaggeration of the ripening process; that it was simply a series of chemical changes going on in the interior of the fruit, a sort of addendum to those which had already taken place and by which the fruit had become ripe. This, however, is not true, for in the first place if the ripe fruit be kept with certain precautions, it may never rot at all. It may wither and dry up, but that is a very different thing. And, on the other hand, a fruit may sometimes decay when it has never become ripe.

We know very well what are the ordinary appearances presented by decaying fruit. The decayed part is readily recognized by its change in color, a softening in consistency, an altered unwholesome taste and a disagreeable odor. These changes present an appearance which is easily recognized.

There is one feature of this process which is of peculiar interest, and which has been known, I think, from time immemorial. That is, that there is an element of contagion about it which is very well marked and easily observed. The rot is communicated by contact. It is as if you were to take venom from a diseased tissue and place it in contact with sound tissues. In that case the sound tissues will become infected. In the same way the sound tissues of the fruit are infected by the contagion of rot, just as a man will take small-pox from a patient already suffering with that disease. Perhaps it is hardly necessary to call attention to this, but where you see decay occurring in fruit from this cause, it always appears upon the surface at exactly the point of contact; and it is contagious precisely in the same sense and to a similar degree as any communicable disease with which we are familiar. Now decay, as I have said, is always accompanied by the appearance of a fungus. This fungus grows in the cellular substance of the fruit. Its filaments penetrate and ramify between the cells of which the pulp of the fruit is composed. These filaments are small, and send their branches among and around the fruit-cells and envelope them everywhere in a network of mycelium. The filaments of this mycelium for their growth require nourishment, and they take it from the substance and juices of the fruit. It is this process of absorption and chemical transformation by the growth of the fungus that produces the alterations in the fruit which we know as decay.

There are two kinds of microscopic fungi which are the most common in decaying fruit. The first and most frequent is that known as *Penicillium glaucum*. This fungus, like the others, has its mycelium and its reproductive part. The latter consists of filaments bearing a tuft of from four to eight little branches, which in turn produce upon their extremities a chain or chaplet of small, highly refractive oval spores. It is called Penicillium on account of the brush, or pencil-like tuft of its spore-bearing filaments, and "glaucum," for the reason that its tint, when in fructification, is that of a bluish green.

[Some oranges were shown which were covered in places with this growth.]

The fungus grows most readily in a damp atmosphere, and it will cease to grow if the air be entirely deprived of moisture. As you see here, the white mycelium generally occupies the external portion of a decayed spot, while the bluish-green fructification occupies the centre.

The other form of fungus which grows in decaying fruit is the *Mucor mucedo*.

This species exhibits a very similar form of mycelium to the last, but its mode of fructification is different. The reproductive filament bears a globular swelling upon its superior extremity, but the spores, instead of growing upon the outside, as in aspergillus spores, are produced in the interior of the globular sack.

We have thus three different genera of microscopic fungi which we have now noticed; namely, Aspergillus, Penicillium, and Mucor.

In all three the mycelium is very similar, while the reproductive part, on the contrary, is different in each; and it is the form of this reproductive part from which the genus derives its name. The two latter are both apt to appear in decaying fruit. Their physiological properties vary mostly in the rapidity and extent of the changes which they induce. The Penicillium grows rather slowly, and produces comparatively less alteration in the physical properties of the fruit than the Mucor.

The latter causes a great amount of softening and discoloration, and is accompanied by the evolution of a considerable quantity of carbonic acid, in consequence of which the decaying fruit is apt to appear tumefied from the accumulation of the gas in its tissues. Otherwise the changes produced by the two fungi are nearly identical.

When a fruit is invaded by either one of these, the mycelium filaments penetrate everywhere through the cellular substance, spreading continuously in every direction from the point where it was introduced. But the fructification of the fungus does not take place except when it comes in contact with the atmosphere.

Take, for instance, a fruit like the apple or pear, in which the epidermis is smooth, dense, and resisting. In such a case the interior of the fruit continues to be invaded by the mycelium, yet fructification does not take place, because the air is not present to assist the process, and the fungus may not appear externally perhaps for a long time. In fruits with a delicate epidermis, on the other hand, such as the strawberry or the orange, the fungus readily penetrates from below through the epidermis and covers the fruit with an abundant fructification, sometimes in a remarkably rapid manner.

Now you see why it is that decay is contagious. It is because it is produced by the communication of a fungus from one fruit to another. It is the presence and growth of a fungus that causes the decay. This can be very easily demonstrated by placing sound oranges, for example, in contact with a decayed one; and in the specimens which you see here, this appearance is prevented, because the mycelium has spread from one point to another, the contagion being accounted for by the presence and continuous growth of the fungi.

There is another condition, however, which is necessary before such contagion can be effectual; and that is, a wound or rupture of the epidermis. The epidermis of most fruits is too firm for the penetration of the delicate fungus-filaments through its surface. There are, it is true, some fungi which have the power of penetrating the leaves and tissues of growing plants from the exterior, but these two are not among them; therefore, in order that a fruit should decay, the epidermis must be broken and give access to the fungous growth. All these points have been most satisfactorily examined by Davaine, in France. He showed that some injury of the integument was necessary for the contagion of decay to be communicated. He took some apples, and placing them in contact with decaying ones, found that if the epidermis were uninjured, they did not decay; but if the integuments of the sound apples were first wounded, the decay was soon communicated to them. If the apples are perfectly uninjured, they may remain for several weeks even enclosed in the interior of a rotten one, without suffering any alteration. There is still another point which is of importance in this connection. I have thus far spoken of the decay as produced by the presence of the fungi. But the question will at once occur to you, whether this is really the fact. Supposing that we have these two phenomena in company with each other, namely, the decay of the fruit and the growth of the fungus, we might explain it in either of two different ways. We might, on the one hand, regard the growth of the fungus as the cause of the decay; or on the other, the decay as the cause of the fungus. For the fungi are plants; and all plants require a particular kind of soil to sustain them, and will not grow in any other. The water-plant, for example, must grow in the water, and the land-plant must grow on the land.

We might suppose, therefore, that the Penicillium was merely a fungus adapted for growing in the substance of decaying fruits, and therefore always found associated with it. M. Davaine, however, showed not only that the fungus was accompanied by decay, but that it was its cause. This was demonstrated by the results of inoculation. By inoculating sound fruit with the spores of Penicillium, it was proved that decay originates and spreads from the points of inoculation. The evidence is the same in character as when a patient is inoculated with vaccine virus, and the pustule follows as a consequence.

This makes it altogether probable that the decay is a direct consequence of the fungous growth. There is only one point which still remains open to question. In order to inoculate the fruit with the fungus, its epidermis, of course, must first be wounded. Under these circumstances is it not doubtful whether the decay may not be due to the chemical influence of the atmosphere, thus admitted to the interior of the fruit and coming in contact with its cellular substances? Experiment shows, however, that the chemical action of the air alone will not cause decay. For if two apples be wounded on the surface in the same way, and one of them inoculated, in addition, with Penicillium, the inoculated apple will rot, while the other will remain sound.

[Examples of apples treated in this way were then shown.]

There is no question, therefore, that the decay of fruit is really due to the growth of the fungus. Microscopic fungi will not only grow upon fruit, but also upon living plants, and sometimes will attack and destroy very valuable crops.

One of the most remarkable of these parasitic fungi is that which appears upon wheat. It not only is interesting in itself, but it also brings to our notice two very extraordinary features, sometimes connected with the growth of microscopical fungi, and especially those which appear upon the cereal plants.

These two peculiarities are, first, that of the alternation of generations, and second, migration of the fungi from one plant to another.

In the first place, what do we mean by the term "alternation of generations"?

Perhaps it may be best understood by remembering that in all ordinary cases with which we are familiar, the successive generations do *not* alternate; but the same one constantly repeats itself, without deviation, in a regular and continuous series. For example, if we sow wheat, we always get wheat as a crop; if we plant potatoes, we get potatoes, etc. etc.

Suppose, however, that turtle-eggs, instead of hatching into turtles, should produce a brood of oysters, and these in turn should give rise to star-fish, and from these again turtles should be produced. This would be an example of the alternation of generations, and something almost as remarkable happens in the parasitic fungus which grows upon wheat. Properly speaking, however, the term alternation of generations is not exactly a correct one.

There is no instance in which really different species of animals or plants follow each other in this manner, nor are they ever related to each other in the way of progeny. On the contrary, the generations which follow each other all really belong to the same species.

It is true that they sometimes *look* very differently from each other; so differently that they have been occasionally regarded as different species. But time has always shown that in point of fact they are actually members of the same species, however different they may be in appearance. Still, the process is a very remarkable one. Perhaps it may be better illustrated by a supposition with regard to the butterfly or the moth and its caterpillar and chrysalis. The moth lays an abundance of eggs which hatch into caterpillars. The caterpillar feeds upon vegetable matters; growing very rapidly, until after undergoing certain changes and moults, it becomes a chrysalis; a creature without legs or organs of vision, without any motion, and hardly looking like a living thing. After a time the chrysalis again moults its integument, and comes out a perfect moth. These three creatures, therefore, are entirely different in appearance, so much so that we should hardly suppose them to belong to the same species unless we knew that they successively changed into each other. Suppose now that each caterpillar, instead of giving rise to a single chrysalis, should produce a hundred of them; and that each chrysalis should hatch into a hundred moths. That would be analogous to what we call the alternation of generations. Nothing of this kind takes place, in point of fact, in the case of moths and butterflies; but it will, perhaps, illustrate the points better than it could be done in any other way.

Now with regard to the microscopic fungi which really present the phenomena of alternation of generations. In the month of June, the young leaves of the wheat sometimes have upon them little narrow streaks of yellow or reddish color. If you will cut them open, they will be found to be little furrows or pustules in the substance of the wheat-leaf, which are filled with microscopic spores. These spores are the products of a mycelium growing in the substance of the leaf beneath. The spore-bearing filaments of this mycelium burst through the epidermis of the leaf, so that the spores are then brought into view. These are yellow in color, globular, or nearly so, in form, and about $\frac{1}{1000}$ of an inch in diameter.

Each spore has upon it a minute filament by which it was attached to the spore-bearing filament. The yellow spots upon the wheat-leaf are called by the farmers *rust;* because their color looks as if rust-powder had fallen upon the plant. The botanical name of the fungus is *Trichobasis*, from the hair-like filament attached to the base of the spore; and this particular species is called the "Trichobasis rubigo-vera," or the true rust-producing Trichobasis. It has long borne this designation, as a peculiar and independent kind of wheat-fungus.

If, however, you examine the same wheat a little later in the season, in the latter part of July or first of August, you will see that these yellow spots are then mingled with brown ones; and the later in the season the wheat is examined, the more numerous will be the brown spots in comparison with the yellow. These brown spots are also formed by a fungus, which has both spores and a mycelium. These spores are longer and thicker than those of Trichobasis, and are of a deep brown color instead of yellow. They are also double-celled, being divided internally by a transverse partition. The brown spots thus produced are the *smut* of wheat, as the farmers call it. The scientific name of the fungus is "Puccinia graminis."

The distinctive mark of this genus is the division of the spore into two cells. There are other allied genera in which the spores are made up of three, four, or five cells; but it is the two-celled arrangement which marks distinctively the genus Puccinia.

Towards the end of the season, we find nothing of these parasitic growths but the black or brown spots. Now, although these two fungi are so different in their external appearance, although the fructifying part is so different in each that they have for twenty years been enumerated as two different species, nevertheless the Trichobasis rubigo-vera and the Puccinia graminis are in reality the same thing.

Their vegetable part is identical; and it produces the two different kinds of spores at different periods of the season. The earliest spores, or those known as Trichobasis, are capable of germinating immediately, whenever transported by the wind or otherwise to a new lodging-place. During the early part of the summer, accordingly, the wheat-rust is undoubtedly disseminated in this way. The brown spores of Puccinia, on the other hand, are the spores of autumn. They do not reproduce their mycelium during the same year, but are intended to last over winter until the opening of the following spring. We have therefore really two generations growing upon the same stalk, two different reproductive organs produced by the same plant, having different structures and intended for different purposes.

The microscopic fungi are disseminated in two different modes: first, by immediate contact, as where the mycelium of the decay-fungus passes directly from one fruit to another; and secondly, by dispersion of the spores, which may be wafted in every direction by the atmosphere.

Perhaps the communication by spores is the most important of the two. For the very diminutive size of the spores and their extreme lightness render them liable to be caught up and disseminated by every breath of wind; and when they reach a favorable locality they at once begin to germinate and produce a new growth. The atmosphere, accordingly, is the great vehicle for the transportation of these spores, all of them being capable of reproducing their parent mycelium, and many of them giving origin to diseases of parasitic nature. There is no better example furnished us of the extreme delicacy and lightness of these spores than that shown by the common puff-ball.

This well-known fungous growth has an external envelope of a papery consistence, and is filled internally with a quantity of smoke-like dust, which is composed of nothing but spores. These spores, as you see, can be dispersed from the fungus like so much smoke; and each little puff which is discharged from its surface, carries with it literally millions of microscopic spores, which float in the atmosphere and are carried in every direction by the moving currents of the air.

Bowdoin College.—This college has sent out 1,765 graduates, and 1,093 of them have become physicians.

Original Communications.

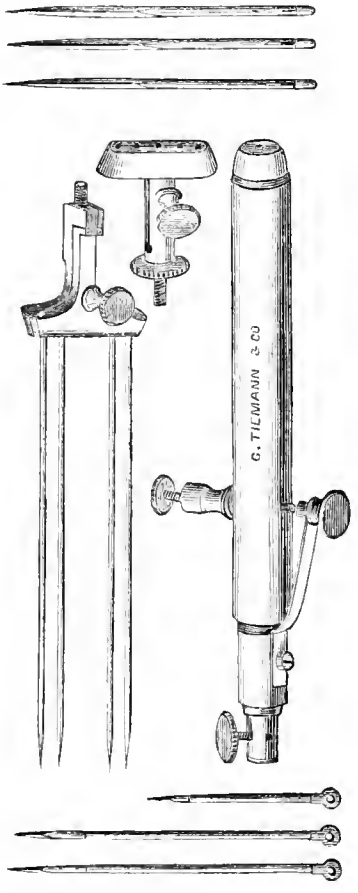
CLINICAL RESEARCHES IN ELECTRO-SURGERY.

By GEORGE M. BEARD, M.D., and A. D. ROCKWELL, M.D.

III.

CERTAIN DISEASES OF THE SKIN.

The accompanying cuts represent the needles—insulated and non-insulated—and needle-holders that we have been accustomed to employ in the operations recorded in this series of papers. The large spear-shaped needles, with sharp edges, we devised for the method of working up the base.

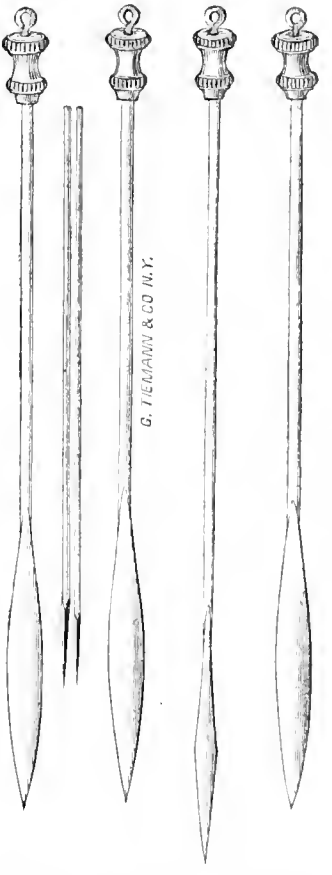


The theoretical arguments in favor of using electricity in diseases of the skin, and the methods to be employed, with the general results, we have elsewhere considered.* Our present purpose is to illustrate by cases what we have previously stated in an abstract form. We present the cases just as they appear in our note-book—the successful, the unsuccessful, and the doubtful.

We may, perhaps, so far repeat what we have previously written on the subject, as to state that in the electrical treatment of diseases of the skin both currents are required in the various forms of electrization, with wet sponges and cloths, with dry metals and the metallic brush. The best results are obtained by the *galvanic* current, and for reasons that will be clear, without argument, to those who are familiar with the differential action of the two currents.

During the past two years we have treated a number of cases of eczema, prurigo, and acne by *central galvanization* alone, *without* making *any application to the diseased surface whatever*; and under this method of treatment, the results have in some instances been more satisfactory than under any other method of using electricity in these affections.

*In central galvanization the negative pole is applied to the epigastrium (the patient holding it by an insulated electrode), while the positive is applied at the top of the head, over the region of the pneumogastric and the cervical sympathetic, in the neck, and down the entire length of the spine, in such a way as to bring the brain, the pneumogastric, the spinal cord, and all the prominent ganglia and plexuses of the sympathetic—indeed the whole central nervous system,—under the influence of the current.**



Not only after medication has failed, but after ordinary *localized electrization* has accomplished but little, central galvanization is sometimes rapidly and quite permanently efficacious. We should judge from our observations up to the present time that under this treatment the more *peripheral* patches of cutaneous disease yielded earlier than those on the trunk, and

* *American Journal of Syphilography and Dermatology*, January, 1872; also *Medical and Surgical Electricity*, pp. 600, 601.

* This method is described in full detail in the *New York Medical Journal*, October, 1872.

near the centre; for example, eczematous spots on the hands and feet would sooner show signs of improvement than spots of the same disease on the upper arm, leg, and back. The dependence of certain diseases of the skin—as eczema, acne, prurigo—on the nervous system is by the remarkable results of this method of treatment demonstrated in a most interesting and suggestive manner.

We first used central galvanization in hysteria, hypochondriasis, insanity, and other allied nervous affections, and the excellent results accomplished by it suggested its use in cutaneous affections.

ECZEMA.

It is an interesting comment on the value of theory in medicine that in eczema, which has not been supposed to be a nervous disease, the effects of central galvanization, according to our present experience, are as decided as in prurigo, and the results here recorded are more satisfactory than in almost any other form of cutaneous disorder.

At first we used localized galvanization in eczema, with sponges, cloths, and the metallic brush, and obtained thereby great relief of the itching, and in time cure; but during the past year we have used central galvanization for this disease, making no application whatever to the diseased surface, and have obtained far more rapid and we believe more permanent results. The following case illustrates the power of central galvanization in a most striking manner:—

SEVERE AND OBSTINATE CHRONIC ECZEMA OF LEG, EIGHT YEARS' STANDING—INTOLERABLE ITCHING—FAILURE OF VARIOUS REMEDIES—RAPID RELIEF AND PERMANENT CURE UNDER CENTRAL GALVANIZATION.

CASE I.—Mrs. S. M., an Irish servant-girl, aged 51, was admitted to the Long Island College Hospital, February 14, 1872, with chronic eczema of the left leg about the ankle, and extending one-third of the distance to the knee. The itching and pain were intolerable, and there was much soreness. The patient was in other respects strong and well, but had suffered from this affection by intervals for eight years. Four years before she had been under treatment at the City Hospital, and had been discharged apparently cured, but relapsed.

The case was treated by iodoform, arsenic, bicarbonate of soda, rhubarb, carbolate of zinc, glycerine, cod-liver oil, iodide of potassium, dulcamara, acetate of lead, wine of colchicum, and acetate of potash. These remedies were variously used, in various modifications externally and internally. From some of these agents the patient derived temporary relief of the itching and soreness; but the average and ultimate effect was that, on April 1st, the following record of the case was made in the hospital book: "Very painful, red and angry, rapidly extending, and now covering nearly the whole leg below the knee, and most of the dorsal aspect of the foot."

Arsenic and tincture of cinchon. comp. were now ordered, but April 15th, the record was: "very much the same." At this time, Dr. Davis suggested *localized faradization*. This suggestion was acted on with gratifying result; the intense distress was at once in a measure relieved.

April 16th, the patient was more comfortable than for a long time previous.

April 23d, very much improved and comparatively comfortable.

At this time Prof. A. B. Crosby, the surgeon in charge of the ward, requested us to see the patient, stating that she had been very obstinate under the various remedies that he had tried. The patient was suffering greatly from the severe itching and burning, and the soreness was so great that only with difficulty could she hobble about the ward. The appearance of the diseased part was red and angry, and some portions were more or less covered by scales.

We decided to try on the patient the effect of *central galvanization, making no application whatever to the diseased part*. We were induced to make this trial on the strength of successes in other and milder cases of cutaneous diseases. Our chief hope was, perhaps, to relieve the itching and pain; a permanent cure we had no reason to anticipate. As the patient was a good and willing subject on which to demonstrate electrical applications, she was taken before the class of the Long Island College Hospital, and treated by central galvanization, the statement being made, that we did not hope thereby to cure, but simply to illustrate the method of using electricity.

The details of the applications were entrusted entirely to Dr. Edwin E. Smith, house-surgeon, who carried out the treatment with great faithfulness, and to whom we are indebted for the full history of the case as here presented.

The relief of the itching and pain was very rapid, although on the 25th Dr. Smith made the following record: "A little more irritable." This result was probably due to over-treatment, too strong currents, or too prolonged applications.

April 30th.—Patient "much better."

May 10th.—"Still steadily improving." The appearance of the leg was now much changed for the better. The most obstinate portion was the region about the ankle. The applications were made four and five times a week with a 12-cell zinc-carbon battery of Kidder for about ten minutes at a séance.

May 25th.—A lotion of acetate of lead wash was ordered by Dr. Crosby, to contract the enlarged capillaries.

June 5th.—"Patient is walking about out-doors with comparative ease, and is nearly well."

At this we again presented the case before the class of the College, demonstrated on her our method of central galvanization, and pointed out the extraordinary and unlooked-for improvement. The skin of the whole leg, except around the ankle, was well, and the patient for a long time had been entirely free from itching and pain.

June 15th.—The patient was "discharged cured."

Jan. 13th, 1873.—Dr. Smith informs us that there has been "no recurrence of the difficulty."

The above case, taking all the facts into consideration—its long standing, its inveteracy under manifold treatment, and the immediate and rapid relief and cure under central galvanization, is certainly most extraordinary, and it will not subtract from the instructiveness and brilliancy of the result, if in future years a fresh attack of the disease should occur. Although the case was not, so far as we know, studied by any recognized specialist in dermatology, yet among the very many surgeons and physicians who watched its progress before and during the electrical treatment, there was, we believe, no difference of opinion in regard to the diagnosis, and there was no question that the cure was wrought entirely by *central galvanization, acting upon the central nervous system*, and thus improving the *peripheral* nutrition.

ECZEMA OF HEAD AND FACE AND LOWER LIMBS IN A CHILD; RAPID IMPROVEMENT, WITH DISAPPEARANCE OF THE ERUPTION UNDER CENTRAL GALVANIZATION.

CASE II.—John B., aged 3 months, was admitted to

the Electro-Therapeutical Department of Demilt Dispensary, March 8, 1872. The child was affected with eczema of the scalp and face, which was most marked between the eyes, and extended down the back, and on the legs from the knees to the feet.

The eruption was very moist, and the diseased part was covered with thick yellow scabs. The child was very restless at night; was very constipated, and could scarcely open its eyes. The case had been treated by various poultices and ointments. At that time we were experimenting with central galvanization in diseases of the skin, and we resolved to test the method in this case. After the third application the bowels became more free, the child slept well, and the eruption had dried up, and the scabs peeled off. At the end of two weeks the fourth and last application was given; the disease had then nearly disappeared from the back and legs. Since that time we have seen nothing of the patient.

It is proper to remark of the last case that, because of the situation of the disease, it was impossible to use central galvanization without directly acting on some portion of the diseased surface. It is possible, therefore, that the benefit was due in part to the local action of the current, and yet we were not able to trace any more rapid improvement in those portions thus slightly acted on than in the portions not touched by the electrodes.

The effect of merely localized applications is illustrated by the following case:—

CHRONIC ECZEMA OF THE LEGS AND FEET, ONE YEAR'S STANDING—RELIEF OF PAIN AND ITCHING UNDER LOCALIZED FARADIZATION AND GALVANIZATION.

CASE III.—Michael P., aged 64, had suffered for twelve months from chronic eczema of the legs and feet, accompanied with terrible itching and burning sensations. The affected parts were but little sensitive to the electric current, either galvanic or faradic. Localized galvanization and faradization were employed, and some of the time the electric brush with a strong current was not only well borne, but was most grateful to the patient. The applications were made from five to twenty minutes. *In all cases there was relief of the distressing pain.* Symptoms of relief began to appear soon after the beginning of the séance, and at the close was sometimes absolute. This relief lasted at first from two to twelve hours.

The patient continued treatment for three weeks—in all six applications were made. The intervals of relief were sensibly lengthened, and the patient abandoned treatment. With the relief in the itching and pain there was corresponding relief in the appearance of the diseased parts.

ECZEMA OF ARM AND HANDS; RELIEF OF PAIN AND ITCHING UNDER LOCALIZED GALVANIZATION.

CASE IV.—Mary C., aged 46, had been afflicted for some time with eczema of the forearm and hands. In the palm and back of the hand there was considerable disease, and the pain was very intense. She complained of severe itching and scalding. The general condition of the patient was very good. The hands were considerably swollen, and patches of various sizes appeared on the fingers.

Localized galvanization was used, with good results. There was relief of the pain; corresponding with the relief of the pain there was improvement in the appearance of the disease.

The patient abandoned treatment before an exhaustive trial had been made.

The advantage of central galvanization over merely localized applications was shown in the following:—

CHRONIC ECZEMA OF TWENTY YEARS' STANDING—LOCALIZED GALVANIZATION AND IMPROVEMENT—SUBSEQUENT RELAPSE, AND MORE RAPID AND SATISFACTORY IMPROVEMENT UNDER CENTRAL GALVANIZATION.

CASE V.—John P., aged 52, had for twenty years suffered from chronic eczema, that attacked by turns different parts of the body. For four years he had by intervals been attending the Skin Department of the Demilt Dispensary, under the treatment of Dr. Woodruff, who had given him various remedies, relying chiefly on arsenic. Under the arsenic treatment the improvement was quite decided, but beyond a certain point he could not be carried.

When brought into the Electro-Therapeutical Department of the Dispensary, there was a small patch of eczema on the back of the left hand, and a little of the disease on the right foot. The history of the disease had been, that it spread over the hand from this one centre.

Treatment by localized galvanization was used for a month, with positive evidences of benefit.

The disease subsequently recurred, and the patient again desired treatment. At that time we were using central galvanization, and we resolved to test it in his case, making no electrical or other applications to the diseased surface. Under this method of electrization the relief was apparently more satisfactory than under merely localized applications. It is more than probable that the patient will again suffer relapse; but, up to the date of writing, we have heard no more of him.

CHRONIC ECZEMA OF THE RIGHT FOOT OF TEN YEARS' STANDING—RAPID AND COMPLETE RELIEF FROM LOCALIZED GALVANIZATION.

CASE VI.—Thomas D——, aged 28, came into the Electro-Therapeutical Department of the Dispensary, Sept. 19, 1871. For ten years chronic eczema of the right foot and ankle had afflicted him, and for two weeks the distress had been so great that he had been obliged to give up his occupation, which was that of waiter. The relief from pain, on galvanization with wet sponges, was immediate, and continued for some time after the séance was concluded. Some of the time, dry metallic electrodes were used, and *always with rapid relief to the distressing sensation of heat, by which the disease was marked.* The electric brush was used at times, and even with a strong current was grateful to the patient. The patient apparently recovered in the course of a month's treatment, and we then lost sight of him.

In the above, as in some other cases of painful diseases of the skin, strong currents were not only well borne on the diseased surface, but were exceedingly grateful.

ACNE.

Our first experiments in the electrical treatment of acne were failures. These failures were due partly to the neglect of the patients to persevere, and partly to our not using *central* treatment. Under the combined influence of central and peripheral treatment, or under central alone, or peripheral alone, something may be accomplished in this affection, although great perseverance is necessary, and it is not impossible that cases which are relieved, or apparently cured, may relapse.

Our observations in this department are as follows:—

ACNE ROSACEA OF LONG STANDING—IMMEDIATE IMPROVEMENT UNDER LOCALIZED GALVANIZATION.

CASE VII.—A medical gentleman, aged about 60, in

April, 1872, requested us to treat him for acne rosacea that had for some time caused him annoyance. The blood-vessels were considerably enlarged on both sides of the nose, the color was a decided red, and there was the usual thickening. The health of the patient was in other respects pretty good, excepting attacks of indigestion with acidity.

We began treatment with localized galvanization—with wet cloths and sponge, sometimes using pure metal with a sharp edge. When the metal was used, the dilated capillaries were electrolyzed under the negative pole, and gases escaped with a sound that could be easily heard. There was a tendency to reappearance of the dilated vessels, but after a few weeks' treatment they were entirely destroyed, leaving no scar or trace, and the color of the nose on both sides had disappeared. There appeared to be also a diminution of the hypertrophied tissues.

There has been, since that time, some return of the affection, but he is very much better than formerly. The habits of the patient were never intemperate, but he had always been accustomed to use more or less alcoholic liquors.

A French physician has reported excellent results in the treatment of acne rosacea by electricity.

The following is one of the earliest cases of disease of the skin that ever came under our observation :—

Case VIII.—Mrs. —— was referred to us in 1867, for treatment for acne of very long standing. The limbs and face were affected by the disease. An immense variety of treatment had been employed, and the patient had consulted very many American and European authorities—among others, Hebra, of Vienna—and she was nothing better.

At that time we had not used central galvanization, and had had no experience in the treatment of diseases of the skin by any method of electrization.

As a matter of experiment, we used general faradization, but the patient did not continue the treatment long enough to determine just how much benefit was obtained thereby.

It is by no means impossible that general faradization, by improving the digestion and relieving the constipation, might be of great service in acne, either alone or in connection with central galvanization.

In the above case all the symptoms were aggravated at the monthly period ; it is not unlikely that general faradization or localized faradization of the patient, internal or external, might have been of service in relieving the dysmenorrhœa as well as the digestive disturbance, and this might have relieved the acne.

ACNE OF SEVERAL YEARS' STANDING TREATED BY CENTRAL GALVANIZATION AND DRY FARADIZATION.

Case IX.—In May, 1872, a young man of 26 was brought to us by Dr. Carpenter, complaining of acne of the back especially, that for several years had been his companion. The back was well covered with the eruption. The digestion was not right, and the bowels were constipated.

Central galvanization was at once used three times a week, which a part of the time was varied by *dry* faradization with the hand and metallic electrodes—a method Dr. Piffard had suggested to us as efficacious in acne. There was very soon improvement : the large spots began to dry up, but the patient went away after eight applications.

During the present summer (1873) we have been treating a case of acne indurata of the face—a patient of Dr. Thayer—with the negative pole of the galvanic current connected with metallic disks and points, and electrodes armed with many sharp points, alternating with central galvanization. This case has improved slowly but decidedly, and is still under treatment.

Our assistant, Dr. J. H. Sterling, informs us that one year ago a case of hereditary acne indurata of the face and back under his care was treated by eighteen applications of central galvanization without any other treatment, and the disease disappeared. The constipation and headache, which had been very distressing, were also relieved. Up to date (July 1873) the patient was well.

PRURIGO.

In prurigo it would be consistent to expect benefit from electrical treatment. Experience shows that this expectation is well grounded. All methods of using electricity seem to do good in prurigo. Relief of the itching is obtained by dry faradization and galvanization with wet sponges and cloths, but the most permanent results seem to come from central galvanization.

GENERAL PRURIGO, SIX YEARS' STANDING—INTENSE ITCHING—APPROXIMATE CURE AFTER FIFTEEN SEANCES OF CENTRAL GALVANIZATION.

Case XI.—W. R., 9 years of age, came into the Electro-Therapeutical Department of Demilt Dispensary, April 11, 1872. The history was: At the age of three had scarlet fever; this was followed by general prurigo that had never been relieved. The disease covered the back, abdomen, and legs. The itching was most severe. Sleep at night had for years been interrupted by this distress, and marks of scratching were everywhere seen. The disease was at its worst on the back.

Acting on the theory that the disease was of a nervous character, Dr. Woodruff referred the case to the Electro-Therapeutical Department, when treatment by central galvanization was begun and continued for two months. Towards the close of the treatment, June 1, little remains of the eruption were seen excepting on the back, and there was very little itching.

June 15.—The patient abandoned treatment; the recovery appeared to be satisfactory. We have no further intelligence of the case.

Dr. Sterling gives us the following case, the diagnosis of which was not fully clear to him :—

LICHEN ÆGRIUS OF LONG STANDING—SOME IMPROVEMENT UNDER LOCALIZED GALVANIZATION, AND GALVANIZATION OF THE CERVICAL SYMPATHETIC—MUCH GREATER IMPROVEMENT UNDER CENTRAL GALVANIZATION.

Case X.—Mr G——, at the age of twelve, was attacked with an eruption all over the body, after seabathing. Treatment cured the eruption, but a burning, smarting sensation was left in the fore-eye, that always was increased on any excitement. Drinking a cup of tea or coffee, or entering a heated room would bring on burning and smarting in the face, with very decided puffiness. Arsenic and various other remedies had been used faithfully.

May 1, 1871.—Treatment by galvanization of the sympathetic and localized galvanization was begun, and the result was satisfactory; but relapse occurred, and some months subsequently he was treated by central galvanization alone with very great improvement. He still suffers from slight relapses that are always benefited by electrical treatment.

PSORIASIS AND PITYRIASIS.

These diseases have not, in our hands, yielded to electrical treatment with great rapidity. They improve slowly, however, up to a certain point, and in some cases an apparent cure, or something approxi-

ate to a cure, may be obtained by a long course of treatment. Our first experiments in the treatment of psoriasis by electricity were made with Dr. H. G. Pifford at the Dispensary for Diseases of the Skin.

GENERAL PITYRIASIS OF FOUR YEARS' STANDING—SLOW BUT DECIDED IMPROVEMENT UNDER GALVANIZATION, LOCALIZED AND CENTRAL—RELAPSE.

CASE XII.—Miss O——, aged 19, had for four years been a victim of pityriasis, that attacked first the scalp, causing profuse "dandruff," and extending to the trunk. Treatment of various kinds, external applications and internal medication had been used by good surgeons, and with great perseverance, for many months. The benefit had been slight and transitory. A short interval of disappearance of the patches of the disease would be followed by a rapid reappearance, and at no period had she been ever approximately free from the disease.

The patient was brought to us November, 1871, by Dr. Freeman, who, at that time, had the patient under observation. The scalp was then pretty well covered with the disease, and behind the ears were large patches. Dandruff was very abundant. The health of the patient was excellent. Patches of the disease were also on the back, sides, breast, and abdomen.

Treatment by localized galvanization was commenced and continued for three months by intervals. The improvement was quite slow, but after about a month, some of the spots on the breast had entirely disappeared. The patches on the back and sides were most obstinate, and although they changed in their character, had not entirely disappeared when the patient left the city.

The first evidence that the treatment was taking hold was observed on the head; for several weeks before the close of treatment, the amount of "dandruff" had been reduced to a minimum. The patches of disease behind the ears yielded with great slowness. The patient relapsed the next season, and was as bad as ever.

PITYRIASIS CAPITIS OF MANY YEARS' STANDING TREATED BY GALVANIZATION WITHOUT IMMEDIATE EFFECT, BUT SUBSEQUENT IMPROVEMENT.

CASE XIII.—A physician had for many years been annoyed by "dandruff," that was constant and very profuse. By our request he took a course of galvanization. The hair was thoroughly moistened, and the applications were made over the head, as well as over the neck and spine; combining localized with central galvanization.

During the course of treatment, which lasted for several weeks, there was no apparent improvement; but since the abandonment of the experiment the disease has diminished. It is not improbable that here, as in other diseases, the *after* effects may be observed even when the effects during treatment are negative.

PSORIASIS OF THE ARMS AND LEGS OF THIRTY YEARS' STANDING—SOME IMPROVEMENT UNDER LOCALIZED FARADIZATION.

CASE XIV.—Mary P——, aged 63, had suffered for thirty years from psoriasis that attacked the arms and legs. She was sent into the Electro-Therapeutical Department of Demilt Dispensary, April 14th, 1871. Treatment was commenced that day by localized galvanization, by means of adjustable* electrodes, covered with flannel. Both poles were employed.

This treatment was combined with central galvanization. The patient discontinued treatment before a fair trial had been given; but some improvement was observed, even during the short time that she was under observation.

HERPES.

More than a century ago herpes zoster was treated by Franklinic electricity, and, it is claimed, with success. A spot of *herpes circinatus* disappeared under galvanization, and up to date has not returned.

In a case of herpes zoster associated with neuralgia, that we treated during the past year, the neuralgia was rapidly and permanently cured by faradization; the herpitic eruption had nearly disappeared before electric treatment was begun.

In another very ugly and obstinate case of herpes zoster of four weeks' standing there was a decided improvement in the condition as soon as the galvanic current was applied. The most remarkable results of the electrical treatment of herpes have been obtained in the variety known as *herpes frontalis seu ophthalmicus*. This disease, besides being very painful, sometimes excites inflammation of the cornea, and destroys the eye. In two cases that were treated at the Brooklyn Eye and Ear Hospital by localized galvanization, the relief of pain was immediate, and the cure was rapid and permanent. Both of these cases we saw, and one we treated. In both cases the eye was saved.

ELEPHANTIASIS OF THE LEGS, OVER TWO YEARS' STANDING, ATTENDED WITH ULCERATION AND GREAT PAIN—RELIEF OF PAIN—REMOVAL OF THE ELEPHANTINE SKIN AND VERY REMARKABLE REDUCTION IN THE SIZE OF ONE LEG UNDER LOCALIZED GALVANIZATION.

CASE XV.—Mr. P., an Englishman of middle life, a man strong and vigorous beyond the average, a distiller of oils by occupation, returning from his daily duties on the evening of February 22d, 1870, observed, on removing his socks, a small blister on the inner side of the left ankle. The next day he called on his physician, Dr. Rotton, under whose care he remained for one year and more.

The disease spread over the *left* foot and ankle, and in about two months the right foot was similarly attacked. The blisters as they ruptured left inflamed and angry surfaces in their track. The disease involved the surface of the feet, and both legs up to the knees. The treatment carried out by Dr. R. was mainly of a tonic and alterative character, with local applications of glycerine, carbolic acid, and lead wash. At one time Dr. Johnson saw the case, confirmed the diagnosis of elephantiasis, and rendered a diagnosis positively unfavorable.

We first saw the case by request of Dr. R. in May, 1872. At that time the right leg below the knee measured *twenty-five inches* in circumference, and it was covered all over with elephantine skin, excepting an ulcerating surface below the ankle. This ulcer was treated with charcoal poultice and discharged freely. The *left* leg was not greatly enlarged, but was red, angry, and inflamed, and kept up an incessant discharge from the surface.

The patient *suffered horrible agonies*, so that at night the neighbors were disturbed by his howling. He was unable to move from the sofa on which he sat, and where he worked at his newly-learned trade of cleaning gloves.

By our request Dr. E. Mann, one of our assistants,

* Adjustable electrodes is a term that we have applied to flat metallic electrodes of different sizes and shapes; these are provided with flannel or chamois covers. These covers are provided with elastic borders, and may be put on and off at pleasure, and may be washed like towels.

undertook the experimental treatment of the case by electricity. We had never known of elephantiasis being treated electrically, and gave an unfavorable prognosis, and were indeed inclined not to attempt it; only by the earnest request of the patient and his physician we decided to try and see whether we might give him some relief. Localized *faradization* at first tried by Dr. Mann accomplished nothing, and, so great was the anæsthesia, was not felt by the patient.

Localized *galvanization* by means of wet sponges and both poles with zinc-carbon battery of 16 cells was appreciably felt, and very soon began to relieve the pain.

The applications, from 10 to 30 minutes in length, were made at first by Dr. Mann, and subsequently by the daughter of the patient under our supervision.

After two months' treatment the elephantine skin on the left leg was removed, the pain had ceased, and the leg was reduced in circumference from *twenty-five* to *seventeen inches*. The ulcerated portion below the ankle was also nearly well.

The electrical treatment was then discontinued for several months. During the latter part of this time there were evidences of relapse and reappearance of ulcers and pain. The case has been seen by a large number of the profession.

The features in the cases here recorded most worthy of note are the following:—

1. The rapid relief of the itching and pain of eczema, prurigo, and herpes by local applications.

2. The relieving and curative effects of *central galvanization* not only in prurigo, but also and especially in eczema, which has not generally been supposed to be so closely dependent on the nervous system.

3. The fact that herpes, prurigo, and eczema yield in some instances very rapidly, while psoriasis and pityriasis are quite slow and obstinate.

4. The tendency of some cases to relapse even after they have been greatly benefited, while in other cases —notably in eczema and herpes—the cure is more or less permanent.

FREQUENTLY RECURRING SPASM OF THE GLOTTIS

DEPENDENT UPON CHRONIC HYPERÆMIA OF THE LARYNX.

By ANDREW H. SMITH, M.D.,

NEW YORK.

Prof. J. C. L., a distinguished member of the medical profession, from the South, was referred to me by Dr. Agnew in November last. A laryngoscopic examination showed a general relaxation of the mucous membrane of the larynx, accompanied by slight hyperæmia. The history of the case is contained in the following memorandum, furnished by the patient himself, under date of June 16th, 1873:—

"The patient is 59 years of age. Though commonly enjoying good health and supposed even by his neighbors and friends to have rather robust health, he has actually been more or less delicate all his life, and has had several attacks of severe illness, as continued fever in childhood, pneumonia in early manhood, jaundice, probably from catarrh of the bile ducts, and occasionally dyspepsia, which sometimes has continued for a year or longer.

"More than thirty years ago, when in his best health, he was suddenly seized, without assignable cause, with a very intense and distressing laryngeal irritation, causing apparently a spasm of the glottis, which was very much aggravated by swallowing a mouthful of wine, and then almost instantly and completely relieved by a lump of white sugar dissolved in the mouth before it was swallowed. He has often experienced similar attacks, first at wide intervals, but latterly much more frequently. When unaccompanied by catarrhal inflammation they are always promptly and entirely relieved by a concentrated solution of white sugar and less completely by gum-drops or jujube paste.

"If the sugar be exhibited in the form of flavored candy the flavoring essence seems in a measure to neutralize the effect of the sugar. Horehound candy, however, is as effectual as the simple sugar. When the laryngeal irritation is accompanied by catarrhal inflammation the relief procured by sugar is less complete and durable, but is still very appreciable. This was the condition of the parts when I sought your advice last November, there being a constant sense of irritation and daily attacks, generally at night, of spasmodic exacerbations. There was an immediate change for the better after the commencement of your treatment. The applications were made Nov. 16th, 18th, 19th, and 20th, and no attack or spasm occurred until I contracted an epidemic catarrh, some time in December or early part of January. After the cure of the influenza the laryngeal symptoms wholly disappeared and did not recur until about two weeks ago, when I took cold from a trivial change of dress, or concurrently therewith, when they returned with some degree of severity for a few days. They are now subsiding with the spontaneous subsidence of the catarrh which was contracted at the same time."

Finding nothing else to account for the constantly recurring spasm of the laryngeal muscles I considered it to be due primarily to irritability of the larynx caused by the chronic congestion present. This I aimed to correct by the application of an astringent, and I selected for this purpose the perchloride of iron dissolved in glycerine in the proportion of sixty grains to the ounce. This was carefully applied with a brush to the whole interior of the larynx, the hand being guided by the laryngeal mirror. The stay of the patient in town being limited, but four applications were made, but the success of the treatment seems to have been very complete.

ON THE TREATMENT OF

COMPOUND DEPRESSED FRACTURES OF THE SKULL, WITHOUT IMMEDIATE BRAIN SYMPTOMS.

WITH THREE CASES.

By ALFRED NORTH, M.D.,

WATERBURY, CONN.

Case 1.—Thomas Alman, aged 26, born in Ireland, of robust constitution, was first seen

Dec. 6, 1872, at about 4 o'clock P.M. Half an hour previously, while engaged in an altercation in a saloon, he was struck on the forehead with a Scotch ale-bottle. On examination I found a wound upon the forehead which communicated with a comminuted and depressed fracture of the frontal bone between the frontal eminences. A fragment of bone of a semicircular shape and an inch and three-quarters in length was depressed, and its straight edge driven under the overhanging adjacent edge of sound bone,

the depression lessening as it approaches the arc of the semicircle. A fracture or crack also extends from the depression down the side of the head towards the temporal bone. Patient's mind was not affected, nor did unconsciousness follow the accident; in fact, he regarded himself as only slightly injured. Pulse 90, temperature of body natural. As it was uncertain what disposition was to be made of patient, simply brought the edges of the wound together with sutures, and ordered him to be kept quiet and rubber bags of ice to be applied to his head. Twenty-four hours afterward I again saw him at his home, and found indications threatening brain trouble. I immediately proposed the operation of trephining, and performed it with the assistance of Dr. McDonald in the following manner: After etherization, which was promptly accomplished and maintained with a very small expenditure of ether, I exposed the depressed bone. The overhanging edge of sound bone was then gnawed away with Louis' rongeur forceps sufficient to allow the edges of the depressed fragment to be seized and the entire fragment to be brought away. It was now ascertained that the inner table was comminuted and depressed from the outer table. Several bony spiculæ had penetrated the dura mater, and two clots of considerable size were found. Considerable hemorrhage took place and required the persistent application of ice to arrest it.

The edges were brought together and cold applications continued. He was ordered bromide of potash in 20 gr. doses every four hours.

Dec. 8.—Patient passed a very quiet night, sleeping most of the time. Redness of the eyeballs, and the threatening brain symptoms are subsiding. Pulse 80; respiration 20; temperature of body natural, and takes a good amount of nourishment.

Dec. 11.—Wound has healed by first intention except where the syringe is introduced to wash out the part with a weak solution of carbolic acid (grs. 10 to a pint). Pulse 90; at times considerable heat about the head; mind undisturbed; ordered half a dozen leeches to the temples; bowels to be freely moved.

Dec. 13.—Last night, for the first time, patient was delirious and required restraint to be kept in bed. Head very hot; eyes suffused; pupils contracted. He continued to fail rapidly until 6 P.M., when he died. No post-mortem could be obtained.

Case II.—James Hearney, aged 34, while returning home late in the evening of June 4, 1870, was struck on the head with a slungshot in the hands of an unknown assailant coming up stealthily from behind. The blow felled him to the ground. He remained insensible until early morning when he recovered consciousness and walked about forty rods to his home. Not supposing that he was seriously injured, he walked half a mile further to my office to have his wound dressed. Recognizing the serious nature of the accident, I sent him home in my carriage. On arriving, he lightly put his foot upon the wheel and jumped to the ground as if nothing was the matter. On examination I found on the top of the skull, at the junction of the sagittal and coronal sutures a depressed portion of bone of a quadrilateral shape and about the size of the face of an ordinary hammer. This was comminuted and driven down upon the brain a quarter of an inch in every part. An operation being urged as of immediate necessity to save life, he consented. After etherization the rongeur forceps was employed to gnaw away the edges of the opening sufficiently to get at the depressed bone, which was removed piece by piece. After the removal of all the loose fragments an opening in the skull about an inch square remained. The dura mater was uninjured; hemorrhage was slight. The edges of the scalp were brought together and sutures applied.

June 5.—Patient passed a very restless night; mind wandering; head hot; eyeballs congested; pulse 120; bowels confined. Ordered pill cathartic; continued constant application of bags of ice to head.

June 8.—Patient passed a very restless night; delirium increased, and in spite of his attendant he jumped from the bed and had the window raised to get out before he was restrained. His head was hot; the wound commencing to discharge freely; union not having taken place by the first intention. Injection of carbolic acid was used (10 grs. to the oz.).

June 11.—General condition much improved; mind undisturbed; heat about the head subsiding. Wound granulating and discharging freely.

June 26.—Patient up and about the house; discharge from wound diminishing.

August 1.—To-day for the first time patient went to the factory. All unpleasant sensations about his head have disappeared except a slight dizziness, which frequently troubled him previous to the accident.

Feb. 1, 1873.—Present condition as good as before the accident.

Case III.—Mrs. W. Upson, aged 30, an American, on the 10th of February, 1872, while coming out of a store was struck on the head with a soldering-iron, let fall from the roof, a height of twenty-five feet. It penetrated the scalp over the left parietal bone. Aside from being dizzy for a moment she experienced no inconvenience from the blow. As she complained of no unfavorable symptoms, and as the man throwing the iron was positive that the point of the instrument did not strike the head, nothing was done but to relieve the bowels and make cold applications.

Feb. 13.—Patient's condition very favorable, aside from a slight headache; no unfavorable indications were recognized.

Feb. 14.—Patient passed a very restless night; had a severe chill; head was hot and very painful; eyes suffused; pulse 120 and irregular; complains this afternoon of numbness of little and ring fingers of right hand; at times has the same feeling along the forearm. Ordered half a dozen leeches to temple, and bowels to be freely moved.

Feb. 15.—Had no sleep last night; congestion about the head increasing; right arm and leg paralyzed; pupils unequally dilated. As patient was evidently suffering from irritation or compression of the brain, I advised an immediate operation of an explorative nature, which was accordingly done.

Patient being etherized, the scalp was dissected back, which showed a small puncture in the bone about the size of a buck-shot. A circular piece of sound bone surrounding the opening being removed, a cone-shaped piece of skull, having a base of about half an inch in diameter, was found embedded in the brain substance; the dura mater having yielded to the pressure, had given way, and inflammation had followed. The bone and matter were removed, and the soft parts were approximated.

Feb. 16.—Passed a more quiet night, sleeping most of the time; paralysis of arm and leg gone; congestion about the head subsiding; pupils natural; discharge from wound free and mixed with brain matter; mind clear.

Feb. 17.—This P.M. patient had a miscarriage, which produced great prostration, from the effects of which, in her then condition, she died.

Remarks.—From observations made during our late war and my experience at the N. Y. Hospital, as well

as in my practice here. I have been led to believe that a compound depressed fracture, without immediate symptoms, requires a resort to operative treatment. In this class of fractures the injury to the brain is of a more local nature; hence, general symptoms are absent. If now the offending cause is removed before inflammatory action has taken place, we may expect a favorable result by averting inflammation. It cannot be a matter of indifference whether the sharp and partially detached pieces of the inner table are left pressing upon or perforating the sensitive membrane of the brain. If we listen to those who counsel delay, and our patient should survive the immediate injury, it may be only to save him for a lingering and slow death of years, from epilepsy or some kindred disease. Gross says of compound depressed fractures, "that practitioners have long been agreed that the proper plan of treatment is trephining, performed at the earliest possible moment and without the slightest regard to the character of the head symptoms." Then he goes on to state that the case being compound cannot be aggravated by an operation. All loose pieces and those partially detached should be removed. Hamilton advises an immediate operation as involving no additional risk, and removing what we must consider as continued danger to the patient's life. Sir Astley Cooper, Sir Benjamin Brodie, Erichsen, Holmes, Hewit and Druitt make it an imperative rule of surgery, that when the fracture is compound and considerably depressed, to operate immediately, whether there be symptoms or not.

John Asshurst, of Philadelphia, who of all modern authorities restricts the trephine to the remotest limit, says that in depressed fractures although impacted, if thereby the air be not excluded, they should be operated upon at once, whether there be symptoms of compression or not. The question of impaction to the exclusion of air in compound comminuted fractures I should regard as a fanciful nicety; at least no such cases have come under my observation.

The time of operation being settled, the question is, How shall it be done? If the depressed bone can be elevated without leaving fragments of the inner table still pressing on or perforating the dura mater, then this should be done; if not, then remove the bone with the least possible loss of sound material, which, as in cases I. and II., can generally be better accomplished with the rongeur forceps than the trephine or any other instrument.

Results.—The records of N. Y. Hospital gave one recovery to every four deaths; University College, London, one to every three; while in Paris, according to Nélaton's own statement, the operation has been almost uniformly fatal. In the late war 107 operations gave 47 recoveries and 60 deaths, while to set off against this we have reports of 483 cases not operated upon, giving only 99 recoveries to 384 deaths.

REMARKS UPON THE MECHANICAL TREATMENT OF UTERINE DISPLACEMENTS.*

By W. M. CHAMBERLAIN, M.D.,

PHYSICIAN TO CHARITY HOSPITAL AND THE DEPARTMENT OF DISEASES OF WOMEN IN THE BELLEVUE DISPENSARY.

The use of pessaries in the treatment of uterine displacements is an admitted necessity. Debate on this matter, which has been long and sometimes warm, is almost at an end. All the leading gynæcologists, both here and abroad, some *ab initio* and others after a slow conversion of opinion, have recorded their unequivocal judgment in favor of the use of mechanical means as an adjunct to the medical and surgical treatment. Grailey Hewitt and others teach that they are often alone sufficient to cure all the consequences of displacements in removing the cause.

Since the instrument-shops offer us the choice among some hundreds of varieties, it is important to consider the principles which should guide in the selection.

We are thus brought directly to the question, What are the natural forces which retain the womb in its place? This question has been argued ingeniously and at length but to very various conclusions. Charles Bell and Matthew Duncan assign the principal rôle to the tonicity of the vagina as a supporting column; Hodge to the broad-round and utero-sacral ligaments; Priestly and Wright to the pelvic connective tissue. Admitting that all these influences may be combined in the result, it may be said that we have no necroscopic evidence that uterine displacements are dependent upon morbid conditions either of the ligaments or connective tissue: in life these structures are not fairly within reach of our methods of clinical investigation, and we have no means of effecting any direct alteration in their condition, even if we were satisfied as to the occasion for so doing. On the other hand, whatever relates to morbid conditions of the vagina may be fully known, and all the methods of medical art are applicable here.

The lower two inches of the vagina is much more complex in structure and endowment than the upper. Its orifice is closed by a proper sphincter—cylindrical rather than annular—inasmuch as it extends a little distance up the canal. This is re-enforced by the sphincter and levator ani—the transversalis perinei—by a layer of erectile and elastic tissue, and by rugæ of mucous membrane rich in glandular follicles, and in vascular and nervous trunks.

The upper portion of the vagina, on the other hand, is thin, membranous, almost devoid of muscle of its own, and furnishing small attachment to other muscles. It permits of great distention and furnishes comparatively little secretion. Nature thus indicates an active contractility of the lower portion as necessary to the normal condition of the adjacent organs.

It has been very frequently observed that when the vagina is torn or permanently relaxed the transversalis perinei pull the labia apart, and to supplement the vacuity thus occasioned the folds of the vagina are everted, bringing with them both the bladder and rectum. The vagina is thus shortened at *its external* end, and the uterus drawn down. In its natural site the fundus is nearly on a level with the second division of the sacrum, and is prevented from antero-posterior displacement by the mass of small intestines in front and the sharp forward curve of the sacrum behind.

But when the elastic support of the vagina is withdrawn the uterus descends toward the outlet, and as it descends its relations to the bladder are changed. While in its natural site the distending bladder applies against its cervical zone, and thus tends to elevate and even to antevert it, but as it descends it comes to sustain a much more continuous pressure exerted upon the fundus of the organ. At the same time the posterior sustaining force is withdrawn by the rapidly receding concavity of the sacrum. Thus we see ruptured perinæum pretty constantly followed by cystocele, rectocele, prolapse, and retroversion or flexion. Just in proportion as the uterus descends its circulation is deranged; the delicate and inelastic

* Part of a paper read at a meeting of the N. Y. Academy of Medicine.

veins are lengthened and lessened in calibre, as the broad ligaments which contain them are stretched. Reflux of blood thus prevented, congestion ensues, which is greatly aggravated if flexion or version coexist.

If the female cadaver be opened so as to show the true pelvis, and the uterus be retroverted manually so as to make the fundus impinge on the concavity of the sacrum, and a lever pessary be then passed to the fornix vaginæ, the following changes of position are seen: Increase of pressure puts the utero-sacral ligaments on the stretch, and the fundus is brought to apply by its posterior surface upon the anterior curve of the sacrum. As the elevation is increased anteversion becomes inevitable, the direction being given by the promontory of the sacrum—far above the bar of the pessary.

To make the axis of the uterus coincide with the axis of the superior strait, it is only necessary to extend the vagina by pressure upon the fornix.

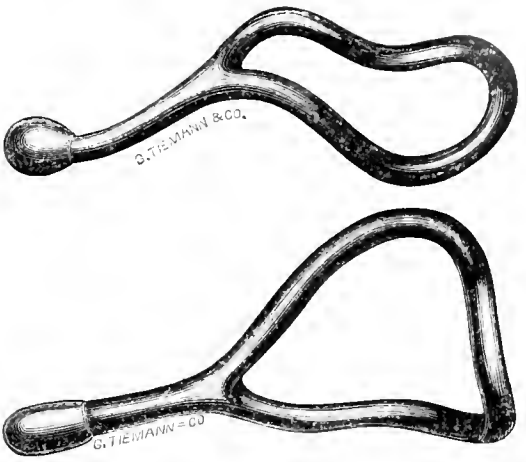
The elevation of the uterus restores the natural condition of the broad ligaments, and whatever measure of congestion may have been dependent upon mechanical causes subsides without further treatment. Commonly this is by far the larger portion.

It may also be observed that, in case of an elastic canal like the vagina, lateral extension antagonizes longitudinal extension. If through an india-rubber tube you pass a body which distends its calibre, its length will be proportionately decreased.

Instruments which distend the vagina interfere with its tonicity and contractility in various ways. Muscles splinted, restrained of their natural function, become atrophied from want of use, from diminished nutrition and from increased absorption, the result of pressure. This criticism will apply to the globes, cushions, inflated bags, and in less degree to the different forms of rings, long ellipsoids, etc. etc. Very excellent results are secured by the rings and levers as used by our most esteemed gynæcologists, but, if the foregoing considerations are true, this must be not without sacrifice.

Something may be said of the fulcra from which the extending power of pessaries is exerted. These are the posterior surface of the pubic bone, the angle formed by the converging rami of the pubes, and the fourchette. Hodge's instruments, resting upon the pubes, exert a certain and constant pressure, and are therefore preferred where the uterus is heavy or restrained by acquired adhesions. But for the same reasons they are liable to excite absorption and ulceration and to strangulate the vaginal veins, thereby increasing congestion and leucorrhœa. Albert Smith's, resting in the angle, allow a greater mobility to the uterus, inasmuch as the fulcrum will move under sufficient pressure; but they are less efficient in support, and open the vulva. Cutter's instruments distend the vagina less than either of the others, but, since the power and the weight are close together and the resistance is at the end of a disproportionately long arm, they act at a great mechanical disadvantage and involve a degree of pressure which the fourchette does not well endure. Scanzoni's instruments and the proprietary modifications of Banning, Wadsworth and Babcock have an external fulcrum in a stem attached to an abdominal belt.

It has occurred to the writer that a fulcral point may be dispensed with, in cases where the vagina is entire, and the muscular force of the canal itself be so utilized as to supply sufficient extending and lever power. With this view I have devised the instrument figured in the accompanying wood-cuts. It



may be described as a skeleton wedge mounted upon a slender stem. The upper or fenestrated portion combines the shape of a spoon with that of a wedge. The concave bowl receives the intra-vaginal portion of the uterus, and is applied in the posterior cul-de-sac in cases of retroflexion and version, and in the anterior cul-de-sac in cases of anterior version and flexion; the smaller end of the wedge descends nearly to the muscular portion of the vagina; the stem still lower, so that the terminal bulb is just covered by the labia. The approximation of the thighs in sitting, and their sliding movement upon each other in walking, are supposed to operate upon the smaller end of the wedge, and thus to exert a constant though gentle elevating force, while the slender stem, three or four lines in diameter, is embraced by the muscular portion of the vagina and gives direction and steadiness to the instrument. The bulb is perforated and moves upon the stem by a screw-motion, thus allowing the stem to be varied in length half an inch or more. The uterus should in all cases be reposited or straightened before the instrument is applied. The instrument is made of vulcanite (hard rubber), by Tiemann & Co. I am much indebted to Mr. Stohlman, of that firm, for aid in mechanical details and for the wood-cut.

I subjoin a few cases in which it has been employed.

Case I.—Mrs. A., aged thirty, mother of one child. Anteflexion had existed for an unknown period, recently aggravated to such a degree, that on account of vesical tenesmus, hypogastric pain and lameness, she was practically confined to the supine position. Applied the instrument January 18th, after repositing the womb. Increasing relief followed; in a few days she was able to walk a little, and in the middle of February to go abroad. Has made a very rapid tour of the Continent, and writes (May 5th) from Venice, "The instrument remains as you placed it. It has never given me inconvenience, and I dare not remove it lest I should be unable to go about."

II.—Mrs. B., aged 25; 3 children—aggravated anteflexion—has worn the instrument six weeks, removing and replacing it herself from time to time. The uterus has been elevated to its natural position—locomotion rendered much more comfortable.

III.—Miss C., aged 28. Uterus sharply retroflexed, congested and enlarged. Reposited, and applied the instrument; three days after, the bulb was found protruding half an inch or more, and the flexion partially returned. Removed the instrument and

applied a Hodge's closed lever, which corrected the flexion, but excited pain and tenderness. Removed Hodge's and reapplied the "wedge." After wearing it three weeks the patient reports the subjective symptoms all relieved. She can now stand and walk with ease. Physical examination shows the womb erect and in its proper place.

IV.—Mrs C., multipara, aged 35. Uterus enlarged, and retroverted by intramural fibroid in left posterior wall. Hodge's and Cutter's instruments were tried, but could not be adapted on account of tenderness. The "wedge" was worn two months, and retained the uterus nearly erect. Finally the increase of the tumor partially extended it, and no instrument could be employed.

These are all the cases in which I have found opportunity to use this instrument, and, though insufficient in number, they seem to me to invite further trials.

If, as would here appear, an anteflected womb may be thus erected, it is a valuable result; for, as is well known, anterior displacements have proved much less amenable to mechanical treatment than posterior.

Vulcanite being flexible, under the influence of heat, the angle at which the upper portion of the instrument meets the lower can be varied to suit the varying requirements of individual cases. This is necessary in *all rigid* instruments.

No. 102 W. Thirty-fourth Street.

Progress of Medical Science.

On the Diagnosis and Treatment of Lipomata.—Monsieur Montmeja publishes a new observation of symmetrical lipomas collected in the service of M. Panas, and calls the attention of surgeons to a peculiar characteristic of lipomas which admits, in many cases, the establishment of their presence when the diagnosis is attended with difficulties. This characteristic is the property possessed by fatty tumors of becoming harder by the action of cold. In the cadaver fatty tumors are very hard; a lipoma removed from a living body hardens in proportion as it cools.

It is possible to cool by ice or atomized ether a tumor of doubtful nature, and if to the touch there is manifest induration following the action of the cold, there is every reason to predicate the existence of a lipoma.

Medical treatment, however varied, is powerless to effect the removal of lipomata; but those of small size have been known to disappear under the influence of continuous electrical currents, and M. Montmeja cites one case favoring this mode of treatment.—*Rev. Medico-photo. des Hôp.*, and *Lyon Méd.*, June 22.

The Emetic Property of Apomorphine.—At the Congress of German naturalists and physicians at Leipzic, Dr. Kohler, of Halle, spoke of the emetic properties of apomorphine. This substance is diametrically the opposite of morphine, and produces vomiting when administered in doses as follows:—1. Subcutaneously; six to seven *milligrammes*. 2. By the mouth; twelve to eighteen *centigrs.* 3. By the anus; eighteen to thirty-six *centigrs.* 4. Placed upon the surface of the tongue, six to seven *centigrs.* Animals who were subjected to subcutaneous injections of one to two *décigrammes* experienced stupor, lassitude of the posterior extremities, and troubles of the motor powers. A fatal dose exceeded four *décigrammes* injected subcutaneously.

Prof. Mosler, of Greifswald, thought apomorphine needed to be used when quite fresh in order to produce emesis.

Dr. Riegel, of Würzburg, had used it in more than a hundred instances, and considered it to be the best of emetics. He said that its emetic property is preserved at the end of even six or eight weeks from its preparation, if care be taken to exclude light.—*Revue Scientifique.*

Traumatic Herpes.—M. Verneuil read a paper before the *Société de Biologie*, of Paris, on the 3d of May, saying, *in résumé*, "That herpes should be considered as a complication of traumatic lesions, and should be recognized as having three varieties, viz.: peripheric, that which is developed in the neighborhood of the lesion, and that which occurs at a distance. Herpes may be either rapid or slow in its development; it may supervene with or without general symptoms; it follows wounds of nerves or ganglia; it is owing sometimes to a neuritis, sometimes to reflex irritation, and sometimes to blood changes; it may relapse; it may accompany erysipelas, and it is desirable to distinguish between cases of erysipelas attended by the vesicles of herpes and those of phlyctenular character; lastly, herpes may give origin to a change in the granular layer resembling diphtheria."—*Le Mouvement Médicale*, May 10th.

A New Sign of Pyelitis.—When an alteration in the character of urine is recognized, it is of importance to know if the lesion which gives origin to it is located in the kidney or its pelvis. Several signs have been given by authors to aid in establishing a diagnosis of pyelitis, the most important of which is the presence in the urine of the epithelial cells which line the pelvis and calices. By means of reagents it can be determined if albumen is present or if the quantity of urea is normal. Acid reaction of the urine, according to Oppolzer, is the best symptom of pyelitis. M. Pascalluccì, impressed with the insufficiency of these means, thinks he has found in the appearance of the crystals of nitrate of urea a more reliable sign. After an examination of the epithelium, he directs that nitric acid should be added and the precipitate examined with the microscope. If catarrh is limited to the bladder the formation of these crystals is normal, that is, they are present under the form of rhomboidal hexagonal plates, joined like roof-tiles. In pyelitis, however, these plates are irregular, the angles cut, and some have the form of little pencils, brooms, and feathers. This sign, if constant, is more important than any that have heretofore been mantained.—*Le Mouvement Méd.*, May 10.

Successful Case of Gastrotomy in Extra-uterine Gestation.—At the meeting of the Royal Medical and Chirurgical Society on February 11th, Mr. Lawson Tait reported a case of a woman, aged 27, in whom a retro-uterine pregnancy was diagnosticated on the 23d of September, the child having arrived at term and died about the end of July previous. On November 2d, the operation of gastrotomy was performed as for ovariotomy. On opening the sac the feet presented, and the child was extracted without trouble, excepting in the liberation of the head from the pelvis, into which it was closely packed and to the floor of which it had contracted adhesions. The cut edge of the sac was stitched by a continued suture to the edge of the peritoneal wound, thus completely closing the peritoneal cavity. The upper half of the parietal wound (which was about seven inches altogether) was closed by deep sutures and a drainage tube inserted deep into the pelvic cavity, which was washed out once in eight hours with a solution of sulphite of soda. On the eighth day the discharge lost its fetid character and became purulent, occasionally fragments of pla-

centa coming away, together with hair. On November 29th, the great mass of the placenta was removed and the cavity thereafter closed rapidly, so that by the end of December only a small sinus remained. The chief peculiarities in this case are: the absence of any false labor previous to the death of the child; the leaving of the placenta undisturbed; and the method adopted for closing the peritoneal cavity, and leaving the parietal wound partly open. To leave a communication between the cyst and the peritoneum is to run the gauntlet of pyæmia and peritonitis. Closing the parietal wound entirely must lead to similar results.

If possible, the operation should be made near term and before the death of the child has occurred. If, however, the child is dead, the operation should not be delayed, since the adhesions which take place between the fœtus and the cyst give origin to serious complications.

In the discussion which followed, Mr. Spencer Wells declared his preference in such a case for an incision through the posterior wall of the vagina, since it would have facilitated drainage and would have more closely imitated the natural discharge of the fœtus.—*The Doctor.*

Use of Ozocerite.—Ozocerite, or vegetable wax, or combustible earth, is a paraffine or hydrocarbon, found in Moravia, in Valachia, in Caucasus, near to the Caspian Sea, and can be used for making illuminating gas. In its raw state this substance is of a dirty green, of slight density and fibrous structure. Kneaded in the hands for a few moments it assumes the appearance of ordinary wax. It can be moulded, and with a wick can easily be made into candles. For therapeutical uses either the crude ozocerite or its yellow oil is used.

This substance has upon diseases of the skin an action resembling somewhat that of pitch, without being so harsh. It can be employed mixed with glycerine or with linseed oil. Used in the form of an inunction, it is specially useful in psoriasis; also in chronic cutaneous disorders, such, for example, as eczema, tinea tonsurans, and ringworm.—*Giornal Ital. del Malat. Ven. et del Pelle*, Apr.

Oxygenating Remedies.—Under this name are embraced several remedies which, when introduced into the blood, lead by their decomposition to a liberation of oxygen. They are best known in this country, in England, and in Belgium; and in the latter Dr. Van den Corput has made a number of experiments to show their efficacy and demonstrate that the alkaline hypochlorites are to be preferred to the chlorate of potash, recommended by Dr. Smith. Lately Dr. Richardson, of London, has introduced into practical medicine the use, for this purpose, of peroxide of hydrogen, the dose of which is from half a drachm to a drachm daily. These remedies are indicated in two classes of affections, viz., those in which respiration is imperfectly carried on, and those which depend upon incomplete nutrition. They render valuable service in asthma, pneumonia, croup, certain heart affections, and are none the less valuable in stimulating the forces which govern nutrition, oxygen being one of the best of tonics.

Dr. Van den Corput has had considerable experience in the administration of a mixture of hypochlorite of soda with cod-liver oil. The latter is administered as an aliment, but when given pure is frequently attended with bad results. When there is a deficiency of oxygen in the blood, owing to pulmonary lesions, it becomes very often injurious to increase the carboniferous elements of the blood without associating with them elements capable of furnishing the oxygen for their combustion.

Dr. Foster, of Dublin, has, on his part, published two cases of occlusion of the foramen of Botal, in which he has been able to show in the most evident manner the influence of chlorate of potash and peroxide of hydrogen upon the phenomena of hematosis. In these two infants the cyanosis was accompanied with evident lowering of temperature, especially in the extremities. Chlorate of potash, in doses of fifteen to twenty centigrammes, caused a diminution in the degree of cyanosis and an elevation of 5° to 6° in the temperature of the fingers. The peroxide of hydrogen, however, produced results even more marvellous, causing the cyanosis to nearly disappear, and raising the temperature of the feet and hands to quite the normal degree. This improvement, in order to be maintained, required the continuous use of the remedy.—*Journ. de Méd. de Bruxelles* and *Lyon Méd.*

Slowing of the Pulse after Labor.—The retarded pulse which follows parturition has been remarked by McClintock, Blot and Marey, and more recently by Prof. Emilio Falaschi, of Sienna, who contributes to *Lo Sperimentale* of March the results of one hundred and eight observations in the hospital of that city, in which he has paid special attention to the age of the patient, her state—whether primiparous or multiparous, the presentation of the fœtus, duration of labor, etc.

He determines that retardation of the pulse is met with in a sensible and persistent degree in only about the fourth of those recently delivered. The number of pulsations varies in each case from 44 to 52; in one case becoming as low as 38.

This slowing, with certain exceptions, shows itself nearly always within eighteen to thirty hours after *accouchement*, and ceases ordinarily at the fifth or sixth day from the same time. The age of the woman seems to exert a certain influence, the pulse remaining quicker in the young than in those who have passed thirty-five years. Primipara manifest this symptom more frequently than multipara. Neither the season, hour of the day or night, duration of labor, nor presentation and position of the fœtus, have any influence in modifying it

Slowing of the pulse takes place not only after simple labor, but also after the birth of twins; not only after labor at term, but also—according to a few observations—after premature labor at the fourth and sixth months and abortion before the fourth month. The phenomenon followed, as well, expulsion of fœtuses which had died four or five days previous to birth; but in these cases Sig. Falaschi has never observed it to occur previous to the birth. Whenever accouchement is complicated with considerable hemorrhage the retardation of the pulse fails to take place, or lasts for so short a period as not to deserve mention.

The labor pains have no influence upon the number of pulsations, at least not when they are not very intense, and the lacteal secretion is also without effect if the slowing of the beats has preceded its establishment. If, however, it is developed before this phenomenon occurs, the latter is prevented.

Whenever it is well marked, and when it persists for several hours, it is to be taken as a very favorable sign.

Method of Treating Functional Dyspepsia, Anæmia, and Chlorosis.—Brown-Séquard has employed successfully a method, which consists in giving at one time a small quantity only of liquid or solid food, and that at regular intervals, varying from ten to twenty minutes or half an hour.

The articles which he recommends for this mode of dieting are roasted or broiled meats, eggs, well-cooked bread, milk, with butter and cheese, and a very small quantity of vegetables and fruits. This mode of alimentation should be continued for two or three weeks, after which the patient may be allowed to return gradually to the usual mode of three meals daily. Dr. Brown-Séquard has not always succeeded with this mode of treating the conditions above named, but in no case has it produced aggravation of symptoms. He recommends its trial in the vomiting of pregnancy, having had several cases in which it succeeded.—*Bulletin de Thérapeutique.*

Albuminous Expectoration following Thoracentesis.—Dr. Terrillon, writing in the *Gaz. des Hôp.*, says he has met with twenty-one cases in which this phenomenon was observed. It was very commonly accompanied with more or less dyspnœa, but was not so grave in its nature as many have supposed. The first hypothesis with regard to its causation was, that the lung had been punctured by the trocar; the second that spontaneous perforation had occurred, and third, that the fluid remaining in the pleura had traversed the lung-tissue and been rejected by the bronchia. This writer rejects these to agree with the explanation of M. Hérard, that it is due to pulmonary œdema.—*Lyon Méd.*

On the Viability of Infants Born before Term.—Dr. Lavirotte remarks (*Lyon Méd.*, Apr. 13) that the intra-uterine age of the fœtus is not the only condition of viability, and has undertaken to discover the other conditions. After the age, he says, "it is on the volume of the child, on its weight, its muscular force, the more or less advanced organization of its skin, or its nails, that one ordinarily relies for determining the degree of viability." But it will not do to rely on these external signs only. Observations of the functions of the internal organs afford much more certain signs. Respiration sufficient to vivify the blood is necessary; and so above all are those acts relating to digestion, from suckling to defecation. Two fatal cases are given—one of a child born at the eighth month, in whom the cerebral development was wanting; the other, a seven months' child, in whom digestion was not performed. No one, he says, denies the fact that the weakness of infants born before term is due, above all, to a default of development, and he wishes to emphasize the importance of estimating the development of the digestive function when one would judge of the degree of viability of a weakly infant, the appearances of the skin, nails, etc., being of secondary value.

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THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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

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OUR INFLUENCE WITH THE PUBLIC.

THE subject of our last leader, having reference to the influence which physicians, as a class, should exercise upon the community, suggests some remarks upon the best means that can be used to gain and to maintain such an influence.

We believe that it is necessary to educate the people. It is a recognized fact that one of the greatest barriers to a communication with the public is the rigid exclusiveness which hems in all our purely professional acts. There is, no doubt, much to excuse this state of things in the very nature of the science of medicine, requiring as it does the possession of a certain amount of special culture to appreciate the real force of its fundamental truths. As a science, it must be considered an exclusive and special one. Those who look at the subject only in this light, and who are intent upon the cultivation of the higher branches of our art, naturally care not to trouble themselves to teach others than those who are cultivated to the point of understanding them. To a certain extent this must always be the case, but the serious question which presents itself at this juncture is, Have we not carried this exclusiveness too far? Have we not also, in the fear of being undignified, not to say unprofessional—in the fear of transgressing our Code of Ethics—damaged our best interests as a community, and thoughtlessly allowed golden opportunities to pass by, which, if decently improved and prudently used, would have given us the very power in the body-politic which we now find we so much lack.

We cannot expect outsiders to listen to us when speaking of abstract subjects—the particular character of a microscopic cell, the peculiar significance of a given symptom, or the intricate and ingenious explanations which belong to pathological manifestations—for if there was such a desire to be informed upon such matters, no benefit could be derived therefrom. We are willing to go far enough to admit that such a knowledge would be absolutely detrimental alike to the teacher and the would-be pupil; that in many things connected with medicine, and especially medical treatment, our patients and the public had better be kept in ignorance. But beyond this we think that the requirements of the age do not demand us to go. There is a middle ground upon which the profession and community should meet for mutual benefit. There are certain truths which should be laid before the people, certain facts which they should know, and they expect to hear them from the profession. We have always believed, and still believe, that these requirements can be met without laying any of us open to the charge of advertising ourselves or of cheapening our calling. If we can succeed in finding this middle ground, and occupying it as becomes educators and advisers, we can obtain and maintain a hold upon the community which we can do in no other way. Nothing will better convince the people of our usefulness than by making ourselves useful to them; nothing will conduce more towards gaining public respect and confidence than proving to them our capabilities as instructors and counsellors.

We have no disposition to underrate our standing as a profession; there are no arguments that can be used to prove that we are not capable of sustaining the requisite dignity, that we are not able to stand as a body of scientific men upon our own merits; but, notwithstanding this, we must admit that the public do not hold us in that estimation which our attainments as scientific men entitle us; that as a body of educated men we are only occupying a third rank in the liberal professions. We cannot see how we compromise our dignity by coming in the same relations to the people as do the clerical and legal professions. We can address our audiences of outsiders in as becoming a way and as effectively as can either of the other learned professions, and by so doing we can have an equal amount of influence with them, leading popular opinion upon subjects concerning which we can speak with authority. Within the last ten years physicians have made a commendable progress in this respect, and we have no hesitation in saying that the profession of medicine has been raised thereby in public opinion. The doctors are not so much ridiculed as they were formerly, but are being more and more respected for the learning of which they prove themselves possessed. Popular lectures upon medical and scientific subjects by representative medical men are not unfrequent affairs, and such lectures are as numerously attended as any other similar entertainments. We have not heard that any harm has come of this practice; even the most fastidious caviller for medical dignity, the most literal interpreter of the Code, having failed to

find objections. On the contrary, however, we have conquered a prejudice among ourselves which now enables us to present our claims for respectability and attainments in the same direct way as has been done by the lawyer and the clergyman.

By increasing a respect for us by the community we gain proportionately in influence, and, gaining in influence, our opinions on all subjects connected with sanitary matters will have their due weight. As it now is, the profession has very little to say on these matters, and generally allows any one to represent it who may have the requisite impudence to pull the necessary wires. There is no question in our minds that if medical men chose to exert their power they could use it to the best of advantage; our health-bills would be made to please the profession, instead of being left to a few conniving medico-political hucksters, whose only concern is to have laws so framed and compromises so effected as shall secure some personal benefits in the shape of large-salaried offices. In other countries, where medical men have their proper standing with the community, their wishes in all projects connected with health and educational matters are respectfully considered by legislative bodies, their special organs are considered the legitimate and authoritative mouthpieces of a powerful class; the resolutions of their societies are always well considered, and not unfrequently medical men are honored by a request to give their opinions in the shape of addresses in the legislative halls. We are convinced that by placing ourselves in our proper relations to the community, by proving to them that we are not too exclusive to look after their interests, they will in turn repay us by respecting our advice and courting our opinions.

There is now more of a necessity than ever that physicians should serve man in something more than his individual state. Important as may be his functions in the latter, the service which he may now render to man in his social or relative state is, if possible, still more so. His relation to mankind, as a whole, is a peculiar and responsible one, especially in reference to the means that can and might be employed to prevent and arrest the spread of epidemics, and to establish sanitary regulations founded upon medical experience and observation. The progress of civilization, the increase of knowledge, etc., among the people, the means which are in daily use for their enlightenment upon matters which relate particularly to their social welfare, create a demand for the very knowledge which the physician, above all others, can impart. The daily press is beginning to appreciate this want, by leading articles on sanitary matters, and publish regularly the doings of health boards, sanitary conventions, and the like.

More than this, many of the laymen, statesmen, and thinkers, not satisfied with information they can obtain from these sources, are beginning to look to the medical journals for more advanced ideas upon the subject. The majority of the community are taking a deep interest in these matters, and the want of the right kind of knowledge concerning them is considered as important as that which relates to ordinary commercial, interpersonal, or international ills. The field is now more than ever open for the medical worker to become a public benefactor, to perform a duty which society has a right to expect of him. It will be the legitimate sphere of the medical man of the future, and if he fails to take advantage of his opportunities, there will be others more ambitious, but less capable, who will occupy the field for him. Already we see quack sanitarians springing up, ignorant pretenders who presume to educate the community on health matters, the publications of whom are beginning to replace the advertising almanacs of the nostrum-venders, all of which give indications of a growing want on the part of the public. This want must be supplied in some shape or other, and it remains to be seen whether the physician of the present and the future will be equal to the emergency.

In our efforts to present facts to the people, there is no necessity for advertising ourselves. When we address popular audiences, either from the rostrum or the magazine, the scientific journal or the daily paper, we are only expected to give opinions, to teach the people, to speak for the cause, but not for ourselves. Popular audiences are critical enough to understand motives, and if such motives be pure they are sure to be appreciated. It is not necessary, for the benefit of a principle, to uphold the expounder as a pivot upon which such a principle revolves. But it is obviously unnecessary to enlarge upon this point, as the boundary line of professional propriety and professional dignity is plainly marked out for every honorable man.

There is another aspect in which to view this subject. The physician, as an educated citizen, stands in another relation to the community. As a medical man, pure and simple, he can speak for his profession and create himself an authority on medical matters; but he has an extra privilege to enjoy, an extra obligation to discharge by virtue of his superior educational advantages and extra-mental culture. He should have the same opportunities to discuss pure political questions as any member of the other professions. We do not advise physicians to become politicians, but we see no good reason why they cannot, as scholars, aid in solving the questions of the day. There are, in fact, questions in the politics of the present and the future which can only be discussed by the educated classes, and the physician should seize the opportunities that may be offered to do his share in this great work. He can in this way not only use what influence he may gain for the benefit of the community, but he can employ it for the good of his profession. All this can be accomplished without sacrificing any dignity, without laying himself open to the charge of being an

office-seeker, or without spending time which might be devoted to professional pursuits.

There used to be a time when it was considered highly reprehensible for a physician to have any dealings, directly or indirectly, with political questions; but happily there has been a change of sentiment in this respect. It is no longer disgraceful to be identified with any political question, or even to hold political opinions. We find physicians in our legislative halls all over the country, and we have not heard that they, as a class, have proved themselves stupid in dealing with public questions, nor have shown themselves disloyal to their profession. On the contrary, we know of many instances where an educated physician in a legislature has saved the infliction upon his brethren of many an unjust enactment, the passage of which, under other circumstances, might have been inevitable.

Very few medical men can afford the time to occupy political offices, but each and every physician can do his part towards creating that sentiment of esteem for the profession which shall increase its influence and give force to its opinions. In purely political relations each one must choose his own side; there is good enough in both parties to enlist the labor of the best men, but for strictly medical influence the profession should be a unit. Whenever the public welfare is at stake, whenever discussions come up, we should throw our united influence towards the creation of sanitary reforms, and not bewilder the public with hair-splitting distinctions or trivial differences of opinions concerning pet theories. It is this disposition to differ in matters of detail which the public cannot appreciate; and for the pains we take to be precise in ventilating individual opinions, we earn for ourselves the unenviable title of quarrelsome. In fact, almost all of the discussions which have been published in the daily papers partake of that character, and help to maintain such a reputation for us. Prominent among these stand the published deliberations of the American Medical Association, the only use of which, in the eyes of the public, seems to be an opportunity for all sections of the country to represent themselves in a general family quarrel once a year.

We have tried to protect our interests by legislative enactments; but this has so signally failed that we must give up all hope in that direction. In fact, we cannot expect our legislators to respect the claims of one set of citizens at the expense of another set. Our very efforts to protect ourselves have resulted in a diametrically opposite direction. The best way to guard our interests is to make them common with the community, and prove ourselves, by our desire to benefit the people as a whole, entitled to claim their countenance and respect. We have it in our power, if we move in the right direction, of creating for ourselves an influence with the people which no law can make for us—neither any legislative body, by any of its enactments, overthrow.

Reviews and Notices of Books.

THE MICROSCOPE AND MICROSCOPICAL TECHNOLOGY. A text-book for physicians and students. By Dr. HEINRICH FREY, Professor of Medicine in Zurich, Switzerland. Translated from the German, and edited by Dr. GEORGE R. CUTTER, M.D., Clinical Assistant to the New York Eye and Ear Infirmary. Illustrated by 343 plates and containing the price-lists of the principal microscope-makers of Europe and America.

WE regret that continued illness of the reviewer has prevented this excellent book from receiving the notice it deserves. It has been so favorably known to microscopists who have been able to read it in the original that it has already, doubtless, been in the hands of most of those who have made an especial study of this branch of medicine. It therefore seems superfluous to give it an extended notice. The present volume is a translation of the fourth and last German edition, which itself had been considerably altered by the author to correspond with the advance in this science. The first 107 pages are occupied with the theory of the microscope, the different kinds in use, the apparatus for drawing and measuring, and the methods of testing and of using the instrument. Such optical principles as are indispensable for the student to know are laid down with clearness, but theories that are still unsettled receive only a passing mention. This part of the book teaches also the use of the various parts of the instrument and the implements necessary for ordinary microscopic work.

In the following 102 pages the author gives an account of the different ways of preparing microscopic objects, the reagents to employ, tells us how to stain, how to impregnate the tissues, the way to freeze, inject, and how to arrange objects. These chapters will be the delight of the practical microscopist, as they are exceedingly rich in the details essential in obtaining elegant specimens for study or permanent preservation.

The 386 pages immediately following are devoted to a brief description of the minute anatomy of the various organs and apparatuses. The author does not aim to furnish a manual on this subject, but leaves the thorough and detailed account for larger books. The text of this portion is illustrated by numerous plates, and its dryness is thereby very materially relieved. There is little allusion made to the minute changes that take place in diseases, as the limits of the book do not allow it. The American editor and translator has much increased the value of the book by adding important notes and information for students generally. The history of the successive steps by which American skill has gradually brought the American microscope to its present high standard is extremely interesting.

Valuable improvements that have been made by Americans are also noticed. Finally, he has appended to the work a list of the microscope-makers of the world, with their catalogues and price-lists, and gives directions for making purchases here and abroad. With these additions it is the most complete book of the kind we know of. Every practitioner or student who wants a practical instructor and companion for microscopical study should own this book. The fund of information that it contains is not to be found elsewhere.

In conclusion, we have little fault to find with the way in which the work has been rendered into Eng-

lish. It is in general a vast improvement on many of the translations which are current among us. In some places we could wish that the names which have already had the sanction of use had been retained. Such terms as "iodized serum," "beaker cells," "reef and ribbed cells," have been recognized in this country and in England. It would seem more sensible, too, to adopt the terminology of our own Pharmacopœia than to retain the German. In other respects there is little to complain of. There are but few typographical errors, and the whole get-up of the book is extremely good.

THE FUNCTION OF THE EUSTACHIAN TUBE, ETC. By THOS. F. RUMBOLD, M.D., Saint Louis. South-western Book and Publishing Co., St. Louis.

WE have before us a pamphlet of 40 octavo pages on the "Function of the Eustachian Tube," by Thos. F. Rumbold, M.D., St. Louis.

The author announces at the start that he will endeavor to prove the correctness of the following propositions, viz.:—

1st. That during the act of deglutition the Eustachian tube is not an open passage into the tympanum.

2d. That the walls of the Eustachian tube are constantly in slight contact.

3d. That the air continually permeates the Eustachian tube into the tympanum, thus maintaining the normal air-density in this cavity.

4th. That the air in the normal tympanic cavity is not of equal density with that of the surrounding atmosphere, the air in the tympanum being rarefied.

5th. That one of the functions of the Eustachian tube is the maintenance of this normal air-density.

6th. That the rarefied condition of the air in the tympanum is the cause of the uniform concavity of the membrana tympani, especially that portion of it from which the "light spot" is reflected.

He then proceeds to narrate the histories of seven cases from which, in a somewhat disjointed manner, he deduces the conclusions formulated above into distinct propositions.

In regard to the last of these, we would say, that the uniform concavity of the membrana tympani is not due to the rarefied condition of the air in the tympanum, but to its own peculiar anatomical construction, as described by Helmholtz (*Mechanism of the Ossicles and Membrana Tympani*). As to the other propositions we have no serious objections to raise, except that they lack the element of novelty which the author would seem to claim for them. Rüdinger has taught, since 1869, that in the normal ear there is a constant communication between the air in the pharynx and that of the tympanum. He has even gone so far as to demonstrate anatomically the existence in the uppermost portion of the Eustachian tube of a minute canal, whose function is to maintain this constant communication.

As to the question of there being a more rarefied air in the tympanum than in the external auditory canal, we have simply to say that the difference between the two must be very slight, for otherwise the tympanic mucous membrane would be in a constant condition of hyperæmia, which is not the case in the normal ear. We admit, however, that there is a constant *tendency*—if we may so term it—to rarefaction of the air within the tympanum, and that this tendency is sufficiently marked to establish a steady current of air from the naso-pharyngeal space into the tympanum. This tendency, moreover, is shown by the fact that cicatricial portions of the membrana tympani, if not too richly provided with regenerated radial or circular fibres, are usually found to be outwardly more concave than the surrounding portions. It is proper, however, to state that Rumbold denies the fact that these cicatricial portions ever contain regenerated radial or circular fibres. We also confess surprise at his statement that the circular and radial fibres are muscular in character.

The chief faults we have to find with this essay are, first, its great length. The facts could all have been stated and properly elaborated in an essay of ten instead of forty pages.

In the next place, the author is in a constant hurry to *prove* his points. The reader is thus constantly obliged to dissent from the writer in regard to the interpretation of certain phenomena observed.

Finally, we object to the tendency of the essay, which is to convey to the mind of the reader the impression that otologists are all wrong in their views about the workings of the Eustachian tube and membrana tympani, and that the author, while "dreading to contrast his experience with the learned and matured opinions of such eminent authors as Toynbee, Helmholtz, Tröltsch, and others," was, nevertheless, in duty bound to show these specialists the errors of their beliefs.

Correspondence.

"LABOR PAINS" VERSUS "RETRACTION OF THE UTERUS."

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—I beg leave to lay before the readers of the MEDICAL RECORD the following extracts from a paper* published in the (June) number of the *New York Medical Journal*, together with some remarks, bearing upon what I consider its most extraordinary theories and conclusions.

Page 562. "To avoid confusion, I propose using in the following discussion the term 'labor pains,' in the sense of uterine contractions, a distinction made necessary in our language by the frequency with which we hear it stated that women are having strong 'pains,' when, upon examination, we find only a feeble measure of uterine contraction—the word pains evidently here signifying nothing more than an unduly severe amount of physical suffering. . . . . However revolutionary as it may seem, there is tolerably good ground for questioning the pretty generally accepted opinion, that in the independent action of the circular, oblique and longitudinal layers of muscular fibres, which may be demonstrated in the pregnant uterus, we have furnished us the key to these forms of abnormal uterine action. The existence of such layers is not of course denied, but their importance has unquestionably been greatly exaggerated by the desire of the anatomist to answer the questions of the obstetrician. . . . . Now, it is not probable that these circular fibres possess any more functional importance in the uterus than they do in the vagina, yet I hardly think any one would invoke spasmodic stricture of the vagina proper as a cause of dystocia. . . . . There is strong *à priori* reason to doubt whether the uterus during labor ever contracts, except in its totality. . . . It is matter for consideration whether all the pretended strictures of the os, instead of being due to spasm, are

* The Etiology and Indications for Treatment of Irregular Uterine Action during Labor. By William T. Lusk, M.D., Professor of Obstetrics, etc., Bellevue Hospital Medical College.

not dependent upon insufficient uterine contraction. . . . . Persons often speak of the pains being strong, but affirm that labor does not progress on account of the resistance offered by a firm catgut-like band at the uterine orifice. I have often met with this condition, but have failed to ever find it associated with good pains *of a markedly expulsive character* (the italics are mine—P. C. B.). The patient usually gives expression to an intense degree of suffering, but intense suffering is the constant accompaniment of weak pains and prolonged labor, when the uterus presses upon, or is pressed upon by, its contents for any considerable period of time. . . . . Now, were really good pains associated with this form of rigid os, the same danger (laceration) would be incurred by pressure from above. Instead of the os arresting the expulsion of the fœtus, it would be torn through in most instances like so much paper. As a matter of fact this does not take place, because under the influence of strong pains the os rapidly loses its catgut-like feel, and softening and expansion occur simultaneously. . . . . The uterus, in addition to contractility, likewise possesses retractile properties. These are shown in a very marked way by the manner in which the uterus closes upon its contents after the rupture of the membranes; so, too, by the manner in which the uterus follows down the fœtus during the period of expulsion. . . . . To the same retractile properties of the uterus are to be ascribed the irregular pains so common in cross births and contracted pelvis. . . . . We then have what is termed stricture of the os internum. It is not due to the spasm of any special bundle of circular fibres, but the uterus, as it retracts upon its contents, becomes conformed to the irregularities of the fœtus. The small size of the child's neck permits a more complete retraction of the muscular fibres at that point. . . . . In either case,* the indication is to excite expulsive pains, and this is best fulfilled by kneading and compressing the uterus, seeking thus by a *vis a tergo* to overcome the constriction. . . . . A somewhat exaggerated form of this condition (retraction) produces the familiar hour-glass contraction. Previous to the rupture of the membranes the existence of weakness of pains can hardly be determined. Only after rupture are we in a condition to recognize the presence of primary weakness. Primary weakness becomes dangerous when the uterus, instead of exercising expulsive action, retracts upon its contents so as to closely invest the fœtus. In such a case, the child's life is compromised both by pressure and by interference with the utero-placental circulation. Secondary weakness results where an obstacle exists which the pains prove ineffectual to overcome. . . . . Uterine retractility is not precisely the same force as that which causes the expulsion of a fluid from an over-distended elastic bladder, for retractility and contractility are in the uterus rarely disassociated from one another. When the uterus ceases to contract, it forfeits, in the rule, its retractile properties likewise."

I will make but one more addition to these extracts from the article (although there are other ideas advanced which challenge examination); for I discover that I am in danger of exceeding the length that such a communication is entitled to, in the crowded columns of your journal.

"Every busy man will find in the ordinary events of his own practice the sort of evidence best qualified for verifying or disproving the opinions I shall endeavor to maintain."

Accepting the restriction, I will discuss his "opinions," mainly in the light of my own obstetric experience, extending back through thirteen "busy" years.

It is his opinion that physicians, and others, err in stating that strong "pains" exist when upon examination only feeble contractions of the uterine fibres are found to accompany the "unduly severe amount of physical suffering." Now it is often necessary, for purposes of description, to indicate whether these two symptoms are associated or not. When they are, his use of "labor pains" is brief and (when understood) explicit enough; but when they are not, while it may be elegant to say, "the patient had an unduly severe amount of physical suffering, with but feeble contractions," or, perhaps, none at all, still it takes too much time; and probably the authority of long-continued usage, as well as the force of habit, would cause most people to say that the patient had "false pains," and it is altogether probable that every medical man would know exactly what the expression implied, no matter what his idea concerning the etiology of them might be. On the other hand, "good pains" is an expression used by common consent, when gentle contractions of the body, accompanied by dilatation of the os, attend the physical suffering of the patient.

Prof. Lusk recognizes the existence of the different layers of muscular fibres, but asserts that they possess no more "functional importance in the uterus than they do in the vagina as a cause of dystocia." He doubts "whether the uterus during labor ever contracts except in its totality" on one page, and admits the condition usually described as contraction of the circular fibres of the external and internal os, and of the body of the uterus, in other places; nay, more, he makes repeated use of these phenomena to illustrate his "opinions" on retraction; and in one place uses the word *constriction* as applied to the internal os.

"Pretended strictures of the os" are "dependent on insufficient uterine contraction." As many times as he has met with this condition, he has never found it accompanied by pains of a *markedly expulsive character!* The intense suffering attending these delayed labors is dependent on the *weakness of the pains!!* These are truly unique explanations.

"Vis a tergo" is all that is necessary to overcome these "pretended strictures of the os," from contraction of the circular fibres; and it is also his opinion that if such a spasm were ever associated with really "good pains" (expulsive), the os "would be torn through, like so much paper." His prediction was antedated by fact, several years, in my experience, I having observed this very accident happen to four patients,—in one instance (a "primipara") proving fatal:—He says, "as a matter of fact, this disaster does not take place, because strong pains cause *softening* and dilatation to occur simultaneously."

I have many times, including those above mentioned, met with cases in which strong contractions in the body of the uterus were accompanied by decided contraction and temporary rigidity of a half dilated "os,"—particularly after the exhibition of ergot.* In fact, this result followed its use so constantly in my experience, not only in this stage of labor, but the second and third as well, and upon all the circular fibres of the organ, that I long since discontinued the administration of ergot entirely during labor; and

* Delay during the passage of the neck through os internum in either vertex or breech-presentation.

* See an article by the writer in *N. Y. Med. Jour.* for June, 1869, pp. 265–266. Cases V. and VI.

now, when I give it after the expulsion of the placenta, I always combine it with opium to insure a contraction of the uterus "in its totality."

Dilatation of the "os uteri" seems to me to partake of both an active and passive character, in a "normal physiological labor." The circular fibres cease to exercise their contractile powers for the time being (just as the powerful muscles of the perinæum and "sphincter ani" are often observed to do during the progress of the child in the second stage). And the connective tissue of the "os" alone resists the active, though gentle, contractions of some of the fibres of the body of the uterus. These contractions, besides exercising a direct, dilating force upon the "os" (as I believe they do, and which I shall again refer to), force the "bag of waters," first against, and subsequently through the partly dilated orifice; and thus they become a useful auxiliary in the process. But there are two conditions in which neither the "bag of waters," nor contractions of the uterus in its totality, would be competent to produce dilatation; and yet, in both instances, I have repeatedly observed a satisfactory completion of the process. I refer to a transverse position of the child, with an escape of the "waters," and to complete "placenta prævia." In this latter condition, the os is strongly reinforced by the adherent placenta; and the impulse must at least be much impaired as a dilating force.

Now, a muscle contracts, if at all, in the direction in which its fibres run. The longitudinal fibres of the body of the uterus are in part continuous through the whole length of the cervix, becoming lost in the connective tissue surrounding the os. This may be called their attachment. If these fibres contract the effect will be to shorten the uterus by causing the "fundus" and the "os" to approach each other. Owing to the "incompressibility" of the contents of the uterus, this can only be accomplished by the dilatation of the "os."

I submit that this supposed activity of one set of fibres, alone, is no more wonderful, nor incomprehensible than is the acknowledged passivity of another.

The author of the article under consideration seems to consider that the uterus possesses not only the power, but the disposition to "retract upon its contents" under various conditions. "The closure of the uterus upon its contents, after the escape of the waters," the manner in which the organ "follows down the fœtus during the period of expulsion," the "closure" of the circular fibres at the "os internum," around the neck of the child (in both head and breech presentations), and the hour-glass condition of the body of the uterus which imprisons the placenta,—all these are different manifestations of "retraction," and the latter a "somewhat exaggerated" form of it.

When in pelvic presentation, after the passage of the shoulders, the circular fibres "retract around the neck" of the child, he says the indication is to "excite expulsive pains by kneading and compressing the uterus," seeking thus to overcome the constriction by a "vis a tergo." Strange advice to give a young practitioner, to drop the body of the child, whose very existence depends upon the skill and dispatch which he brings to bear in the management of the case, that he may "knead" a nearly emptied uterus, in the expectation of exciting sufficient "vis a tergo" to expel the child alive. As soon should a helmsman leave his rudder, to trim a sail, in a storm. "Kneading" the uterus is well enough, if an assistant is at hand to do it; but (it seems to me) the "accoucheur's" first duty is to attempt to deliver the head in the usual manner; and if the first hurried effort fails, he should pass a piece of firm rubber tubing (say ⅝th-inch in diameter and a foot long) previously prepared, into the child's mouth, and give his whole attention to exciting respiratory efforts in the child. After respiration has been fully established, and the semi-asphyxiated condition of the child has been relieved, the uterus, having had time to collect its energies, may be able to complete the delivery.

A word more concerning "retraction," and I will bring my "too-extended" remarks to a close. There seems to be no particular objection to the use of the word, if applied to the "os" in the process of dilatation, though that is not at all the sense in which Dr. Lusk uses it; but I can imagine no other condition or function of the uterus, nor do I think he has used the word in connection with any, in which retraction describes the actual phenomena.

P. C. BARKER, M.D.

MORRISTOWN, N. J.

FOUL WELLS AS A CAUSE OF TYPHOID FEVER.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—Fearing that there yet may be some who doubt the drinking of impure water to be a fruitful cause for the development of typhoid fever, I deem it to be my duty to contribute to the columns of your journal some recent experience I have had, and which is, I think, sufficient proof of the fact.

I was recently summoned many miles into the country for the purpose of visiting the son of a farmer, fifteen years of age. I found him with the usual symptoms of typhoid fever.

While in attendance, and within four days, I was asked to see another son, aged ten, in an adjoining room.

He was then confined to the bed the greater part of the time, having had the symptoms attending the prodromic period for about a week. Not yet suspecting the real cause, I made no particular inquiry relative to the condition of the premises except so far as related to the cellar. I found that to be, with a slight exception, free from any poisonous matter.

Within three days I was again asked to see still another child, a little girl aged seven, who was suffering almost precisely as were the other two.

I then began an investigation relative to the house-drain, and found, so far as I then deemed it necessary to examine, nothing which I considered of sufficient cause to produce the particular illness.

But when within three or four days my attention was again called to another child, aged twelve years and four months, I concluded there must be some cause, aside from contagion, which could be discovered. I might add that the children composing the family numbered eight in all, and that upon summoning the balance, and instituting the necessary inquiries, I found that two of the remaining four were complaining of "not feeling well." "Some diarrhœa, with chilly feelings and headache."

I then desired the drain, which received the slops of the house, to be thoroughly opened. It ran in the direction of the well, the water of which was used for the family's general use, although it passed it to the right some four feet. Upon inspection, the following day, I found that there was a perfect communication between the drain and well at a point directly opposite the well, so that all matters thrown into the drain passed directly into the well. And I found all the surfaces of the drain beyond this opening perfectly dry.

I might state that this occurred at what is called "a very dry time," and the water in the well, as I was informed, was much lower than it had been in years. Its use was at once abandoned, but its effects did not cease until the two children who were then slightly ailing, and the mother, took to the bed, and all passed safely through a severe trial of the disease, save the mother, who succumbed to it in six days from the time she went to bed.

The only ones of the family who escaped the terrible scourge were the father and oldest daughter; unless the youngest child, which was still nursing when the mother was seized, was amenable to it (which I very much doubt).

I will not extend this paper by any further remarks, as it will now occupy too much of your valuable space.

D. Colvin, M.D.

Clyde, N. Y.

PERINEORRHAPY.

To the Editor of the Medical Record.

Sir—In perineorrhaphy I use, instead of metallic wire, a suture of horse-hair. Take two horse-hairs, each sixteen inches long; pass them through the eye of a large semicircular needle; bring the four ends together and tie in a single knot. Arm in this way as many needles as you intend to introduce sutures. Then proceed as in the ordinary operation, using Dr. Sims' matchless needle-holder; cut off each strand, after its introduction, close to the eye of the needle, and knot the end. Insert the sutures pretty close together, say half an inch apart. After all are in place, bring each pair of ends together and tie in a surgeon's knot, making the common interrupted suture. For superficial stitches a single horse-hair answers admirably.

Horse-hair is easier of management than silver wire; it causes no suppuration along its course; it does not chafe or excoriate the external genitals; it is not liable to catch in the patient's linen; and when its office is ended it can be withdrawn painlessly. I have never used it in the quilled-suture.

E. S. Bunker.

Brooklyn, July 14, 1873.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 19, 1873, to August 4, 1873.

Simons, J., Surgeon and Medical Director.—Granted leave of absence for 30 days with permission to apply for an extension of 30 days. S. O. 124, Department of the Gulf, July 28, 1873.

Frantz, J. H., Surgeon.—Leave of absence extended from July 20, 1873, seventy days, on Surgeon's Certificate of Disability. S. O. 153, A. G. O., July 29, 1873.

Webster, Warren, Surgeon.—Granted leave of absence for thirty days. S. O. 143, Department of the East, July 28, 1873.

Knickerbocker, B., Assistant Surgeon.—Leave of absence granted by S. O. 88, Department of the Columbia, July 15, 1873, extended 30 days. S. O. 135, Military Division of the Pacific, July 23, 1873.

Woodhull, Alfred A.—Assigned to duty at McPherson Barracks, Atlanta, Ga. S. O. 131, Department of the South, July 23, 1873.

Brooke, Jno.—Relieved from requirements of par. 2, S. O. 78, c. s., from these Headqurs. S. O. 87, Department of the Columbia, July 12, 1873.

Phillips, H. J.—Assigned to duty as Post Surgeon, Camp Warner, Oregon. S. O. Headqurs. Department of the Columbia, "in the field," July 8, 1873.

Lippincott, H.—Assigned to duty at Camp Lowell, A. T., S. O. 53, Department of Arizona, July 8, 1873.

De Witt, C.—Assigned to duty at the Presidio of San Francisco, Cal. S. O. 86, Department of California, July 11, 1873.

Cleary, P. J. A. Assigned to duty at Fort Griffin, Texas. S. O. 139, Department of Texas, July 25, 1873.

Munn, C.—Assigned to temporary duty at Fort Independence, Boston Harbor, and to return to his proper Station (Fort Adams, R. I.), when Surgeon Webster returns from leave. S. O. 143, c. s., Department of the East.

King, W. H.—When relieved by Assistant-Surgeon Woodhull, assigned to duty at Yorkville, S. C. S. O. 131, c. s., Department of the South.

WAR DEPARTMENT.

SURGEON-GENERAL'S OFFICE,

Washington, *July* 24, 1873.

CIRCULAR ORDERS, NO. 5.

The Surgeon-General has observed that certain medical officers neglect to furnish the quarterly reports of wounded and of surgical operations required by Circular Orders, No. 3, Surgeon-General's Office, June 20, 1866. Attention is therefore directed anew to the provisions of that order:

"Washington, D. C., *June* 20, 1866.

CIRCULAR ORDERS, NO. 3.

The directions embodied in the Circular Letter from this Office of January 20th, 1864, relating to the Register of Sick and Wounded and of Surgical Operations to be kept at General Hospitals, will, hereafter, apply to Post Hospitals of a permanent character.

The same form of registration will be employed by Medical Officers serving with detachments or temporary posts, the blank forms for the quarterly reports of wounded and of surgical operations being used for this purpose. These blanks will be issued upon requisition upon this Office.

All Medical Officers will forward to this Office, quarterly, on March 31, *June* 30, *September* 30, *and December* 31, *reports of wounded and of surgical operations in the form heretofore required of Medical Officers in charge of General Hospitals, or else a statement that no such cases have been treated by them. These reports are additional to the ordinary monthly reports of sick and wounded, which will be made as usual.*

A Medical Officer, upon being relieved of the charge of a temporary hospital or detachment, will make the reports above required without awaiting the expiration of the quarter.

By order of the Surgeon-General:

C. H. Crane,
Surgeon, U. S. Army."

Medical Directors will enforce the strictest compliance with this order, and also with General Orders, No. 355, Adjutant-General's Office, November 4, 1863,

and Circular Letter, Surgeon General's Office, March 23, 1864, relative to casualty lists and classified returns of injuries received in action. These instructions have force not only in time of war, but on the occasion of any hostile engagements, however limited.

There are other modes by which officers may aid in maintaining or elevating the character of the corps for scientific usefulness, which must, of necessity, be spontaneous or voluntary. Since the publication of the report of surgical cases observed in the army during the five years succeeding the war, the Surgeon-General has had gratifying evidence that the materials accumulating for a similar report for the next quinquennial period have been prepared with increased and laudable care.

During the past two years the contributions to the Army Medical Museum have been valuable, the number of contributions having slightly augmented in the last year. In the former year, fifty-two, and in the latter sixty-two medical officers were upon the list of contributors. The number of donations from practitioners in civil life has also steadily augmented. But the development of the Museum must always be mainly due to the zeal and industry of the individual members of the corps; who, it is hoped, will ever be keenly alive to its interests, and suffer no suitable means of aiding in its objects to pass unimproved.

Notwithstanding the multifarious correspondence on the subject, both official, and personal and informal, it is found that there are misconceptions regarding the nature and extent of the subject matter to be embraced in the professional reports, and, in a greater degree, respecting the miscellaneous data, the anatomical, pathological, ethnological material, the descriptions of specimens and of autopsies, the accounts of cases not borne on the sick reports, the minutes of analysis, and reports of original researches, in short of all the varied results of professional labor which, in addition to the strictly official returns, it is desired to collect and preserve. In regard to the official medical and surgical reports, it appears impracticable to give more specific directions than are either printed in connection with the blank forms, or in regulations or orders, unless by giving the force of an order to the recommendation in the report published by Circular 3, of 1871, viz.: that the name and military description of all cases entered under Class V., on the monthly report of sick and wounded, should be noted in the remarks, and that the patient should appear, by name, on the reports of the succeeding months until finally accounted for. Nor does it appear possible to express more clearly the wishes of the Office respecting reports of cases of citizens not borne on the official returns. Such reports, and all other information of professional interest, are acceptable, and provision is made for using them to the best advantage, by indexing and preserving them for reference and for publication. In regard to the second class of materials, it is hardly possible to dwell too strongly on the importance of the study and preservation of examples of morbid anatomy, human or comparative, resulting either from disease or from injuries. Medical officers are often deterred from forwarding specimens belonging to pathological groups in which the collections of the Museum are presumed already to abound. But there are few if any classes of subjects in which the Museum can forego the advantages of comparing analogous specimens, and duplicates can always be advantageously used in exchange. Autopsies are often omitted in cases of accidental or criminal homicide, when the proximate cause of death is apparent. But examination of such cases will often prove instructive, leading sometimes to the detection of unsuspected alterations, sometimes to the observation of curious anomalies. Frequently the preservation of normal structures and of entire organs is desirable. It has been objected that some posts are unprovided with dead-houses, or suitable facilities for *post-mortem* examinations. Zealous medical officers will readily improvise means for overcoming such obstacles, and will not fail to make autopsies whenever it is possible. It is important further to note with precision the symptoms in the cases of sudden and violent death. They are usually dismissed in general terms. Yet a comparison of averages, in such cases, may lead to important inferences. The general rule to weigh, measure, or describe in exact terms, whatever is susceptible of precise definition, would not be supposed to require iteration, were it not so often disregarded. The thermometric determination of the animal temperature after grave injuries is a promising field of investigation. The remote results of injuries are often brought to the notice of medical officers, and they will bear in mind the desire of the Bureau to accumulate information on this subject. Everything relating to recoveries after penetrating wounds of the three great cavities, or of the large joints, to examples of successful major amputations, excisions, and ligations, to symptomatic nervous disorders, to instances of the lodgment of foreign bodies, will be of interest. Accurate observations are especially needed in regard to the comparative results of formal excisions and that form of conservative treatment which is restricted to the removal of detached fragments, conjoined with free incisions, when requisite, for the elimination of foreign matter; and, secondly, regarding the ulterior conditions of consolidated shot fractures of the femur.

The Museum possesses numerous crania: but it is the opinion of anthropologists that inferences must be made very cautiously from measurements that do not represent large averages. It is desired that every opportunity be improved of adding to the collection of human skulls. Such labors as those of Surgeon Swift and of Acting-Assistant-Surgeon Comfort, in exploring the tumuli near Vicksburg and in Dakota, and adding scores of aboriginal crania and skeletons to the collection of the Museum, are deserving of commendation, and should excite emulation.

A large number of vesical calculi have been presented to the Museum, which have been classified according to their pathological relations and again according to their chemical composition. The advantages of analyzing and grouping such specimens are obvious, and several leading lithotomists and lithotrists now habitually send to the Museum all the concretions they remove, that they may be analyzed and preserved permanently, and contribute to the formation of statistical data, on a large scale, of the results of operative interference.

These few of the many means by which the Corps can aid in the advancement of knowledge are adverted to, with the hope that the standard of its efforts in this direction will not only be maintained, but continually advanced, as demanded by the requirements of scientific progress.

By order of the Surgeon-General:

C. H. Crane,
Assistant-Surgeon-General, U. S Army.

Eye Hospital at Geneva.—Baron Adolph de Rothschild has given $100,000 for the foundation and endowment of a hospital for diseases of the eye and ear.

Medical Department of Life Insurance.

THE LAWS OF TRANSMISSION OF RESEMBLANCE FROM PARENTS TO THEIR CHILDREN.

By JOHN STOCKTON-HOUGH, M.D.,

OF PHILADELPHIA.

PART I.

Infantem plus ex matre quam a patre habere.*

Mares similes matri, fœminæ similes patri generentur.†

Mas avo materno similis: Fœmella avo similis paterno ‡

THE question of resemblance of children to their parents is one in which many ancient and a few modern authors have found a field for much close observation and profound philosophy, carrying their discussions and deductions to all possible degrees of differentiation and detail. Some of their reasons and conclusions as to causes are scarcely plausible, but many of them bear evidence of close observation and careful consideration, for modern research has in several instances discovered proximate causes which fully corroborate these ancient opinions.

Aside from the physiological and philosophical, this question of resemblance has a practical bearing, and that is in regard to the estimate one may make of the prospect individuals may have of longevity, from an examination of their family history, determining from this their resemblance to their ancestors, and judging of their likelihood or predisposition to hereditary or acquired affections.§

In order to avail one's self of the advantages of a knowledge of this subject, it is necessary to be conversant with the laws which govern the transmission of resemblance, and this is the province of our paper to determine. Ludovicus Mercatus says that there are three similitudes of children to their parents: Prima quidem est in specie, secunda in sexu: tertia verò et ultima in proprietatibus individualibus. The last division comprehends all that we shall have to say on the subject. Several authors have given us works on hereditary diseases, some of which I have named below.¶ We cannot enter very far into this feature of resemblance, and have therefore cited only such cases as bear upon the practical part of the topic under discussion.

It is the object, then, of this paper to bring before the reader such facts as are at hand to determine the general laws which are brought to issue in the following questions:—

1. Do children derive their resemblance and inherit diseases more frequently or more easily from their mothers than from their fathers?

2. Are males more apt to inherit the diseases of their mothers, and females those of their fathers; or is the reverse the case?

3. What are the laws of physical and physiognomical inheritance?

4. Is there any constant relationship between the physiognomical resemblance of an individual to an ancestor, and the likelihood of this individual being afflicted or dying of the same constitutional or acquired disease? If so, is a physiognomical resemblance an indication of a likelihood to the same constitutional affections, or the reverse?

The various aspects of resemblance by relationship are as follows:—

In general:—

1. Children resemble their mothers more than their fathers.

2. Males resemble their mothers, and females their fathers.

3. When children do not resemble their parents, but their grandparents, males resemble their maternal grandfather, and females their paternal grandmother.

Exceptionally:—

1. Children resemble their fathers more than their mothers.

2. Males resemble their fathers, and females their mothers.

3. Male resembles paternal grandparent, female maternal grandparent.

4. Offspring resembles male by whom female was previously impregnated more than its natural father.

I propose to discuss the laws of resemblance as laid down in the three first hypotheses.

Aristotle * teaches that in general children resemble their fathers more than their mothers, and Harvey † theorizes as to the cause. Ambrose Paré ‡ is of the same opinion, and advances as a reason, that "in concubitu" the mind of the woman is more fixed on the man than that of the man on the woman. This explanation may hold in a few exceptional cases, for we not unfrequently read of cases in which the female produces offspring resembling a male of whom she may have been enamored but who was not the father of the product. This influence of imagination or impressions on the mother is familiar to all, in the practice of Jacob, who placed rods of different colors before his ewes that they might bear speckled lambs. (Gen. chap. xxx., v. 37–41.) This view of the matter, however, is not to be taken as the rule, any more than the curious notion of Dr. Erasmus Darwin,§ who ascribed the large proportion of male births in Rome at a certain period to the prevalence of certain ornaments at the orgies of Bacchus.

Prichard ‖ says that "children resemble, in feature and constitution, both parents, but I think more generally the father. In the breeding of horses and oxen great importance is attached, by experienced propagators, to the male. In sheep it is commonly observed that black rams beget black lambs. In the human species, also, the complexion chiefly follows that of the father; and I believe it to be a general fact that the offspring of a black father and a white mother is much darker than the progeny of a white father and a dark mother."

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* Galen apud Jacob Ruffus, De Mulieribus, Lib. i., c. vi. Ext. in Israel Spachius, Harmoniæ Gynæciorum, p. 171 b.

† Socrates apud Aristotelem, De Generat. Animal. Lib. iv., c. iii. Duval's Aristotelis Opera Omnia, etc. Paris, 1654, fol., vol. ii., p. 675, d.

‡ Ludovicus Bonaciolus, Enneas Mulebris, Ext. in Spachius, op. cit., p. 145–6.

§ I have a case in mind, in which a professor in one of our first Medical Schools, who was a medical director of an assurance company, withheld his decision on an application for a large sum until the question of physiognomical resemblance to either parent was settled.

‖ De Mulierum Affect., Lib. iii., cap. vi. Spachius, op. cit., p. 1007–9–10.

¶ Mundinus Mundinius wrote a work (De Genitura pro Galenicis adversus Peripateticos, etc., Venetiis, 1622, 4to, in which he discusses —In qua nova præsertim dogmata spectantia ad fœtuum generationem, similitudines, morbos, hæreditarios, nota corporis, facultatem formatricem calidi nativi, animarumque corruptibilem originem, retelluntur, etc. etc.

Desmuttus de Mara wrote on Pathologia Hæreditaria Generalis, Sive, de Morbis Hæreditariis. Dublin, 1619.

Robertus Lyonnet published a dissertation, De Morbis Hæreditariis. Lutetiæ, 1646, 4to. Prosper Lucas, of recent times, has given us a work on Physical Transmissions, Traite physiologique et philosophique, l'Heredité Naturelle, Paris, 1847–50. None of these, I regret to say, have been within my reach.

* Lib. De Generat. Animal. Lib. iv.

† Anatomical Exercises on the Generation of Animals, etc. London, 1651. Sydenham Soc. Edit., Lond. 1847.

‡ De Hominis Generat., cap. i., Ext. in Spachius: Harm. Gynæciorum, p. 404, c.

§ Zoonomia; or the Laws of Organic Life, in 2 vols. Dublin, 1800, Vol. i., p. 584 et seq.

‖ Researches into the Physical History of Mankind, vol. ii., p. 551.

The son is more likely to have the moral excellence of his mother, while his bent or inclination or genius (vocation best suited) will come from the father, modified in quantity and quality by the mother. The general mental qualifications will be of the type (kind) of the father, modified in quantity and quality by the mother. Sons are thus usually able to follow their father's vocation better than others of a different character.

Sir Anthony Carlisle says that a schoolmaster informed him that his scholars whose fathers were mechanics learned mathematics better than classics, while those whose fathers were classical scholars learned foreign and dead languages better than mathematics.

Those who maintain that children derive more of their qualities from their fathers than from their mothers have given no substantial reasons nor sufficient number of examples in support of their position to convince us that this is the general law. The truth of the matter seems to indicate that such cases as appear to conform to this view are exceptional, and often come from coupling unequally bred individuals, the male, in such cases, having the prepotency in transmission. In breeding animals this fact is often taken advantage of as a matter of economy. One well-bred male may transmit his superior qualities to a large number of offspring in a single season, while the female can give any qualities she may possess to but few, generally only one product.

In selecting animals for breeding, "economical purposes have made the male in general the most important, simply because he serves for a considerable number of females. The consequence of this has been that more attention has been paid to the blood or purity of race of the stallion, bull, ram, and boar than to that of their females; and hence it may be the case that these males more frequently transmit their qualities to the offspring than do the inferior female with which they are often made to breed. But this circumstance can scarcely be adduced as a proof that the male, caeteris paribus, influences the offspring more than the female."*

According to Mr. Louatt,† the relative influence of each parent, in breeding, on the offspring depends most upon the mother, where the parents are equally well bred, other things being the same; but the high-bred male pairing with the half-bred female will have a preponderating influence on the offspring.‡ Socrates and Coriscus are of the opinion that children generally resemble their mothers more than their fathers, and this appears to be in harmony with the teaching of our most eminent physiologists and scientists.

Linnæus conceived the character of the male parent predominated in the exterior parts both of plants and animals, and the same opinions have been generally entertained by more modern naturalists.

Mr. Knight § seems to differ somewhat from this opinion of Linnæus, "for I have observed," says he, "that seedling plants, when propagated from male and female parents of distinct characters and permanent habits, generally, though with some few exceptions, inherit much more of the character of the female than of the male parent, and the same remark is applicable in some respects to the animal world."

"Mr. Cline, the eminent surgeon, has observed," says Mr. Knight,* "in a communication to the Board of Agriculture, that if the male and female parent differ considerably in size, the dimensions of the fœtus, at the birth, will be regulated much more by the size of the female than of the male parent."

According to Earl Spenser,† Mr. Cline believes "that it is alway desirable that the male should be smaller than the female." The Earl is of the opposite opinion, and I think justly so, if we are guided by the fact that males are always naturally larger than females.

The comparative influence of the male and female in transmitting hereditary disease is one of great interest, particularly in regard to syphilis. In this last-named affection, authorities differ greatly,—from the view of M. Cullerier,‡ who believes that it is never transmitted from the father to his offspring, to that of Mr. Hutchinson,§ who is of the opinion that the father can transmit the disease in as severe a form as the mother. M. Cullerier is supported in his view of the relative power of transmission, by the one or the other parent, by MM. Notta ‖ and Follin.¶ Prof. Boeck ** and Mr. Morgan †† believe that the father rarely transmits the disease, and Dr. John S. Parry ‡‡ says, after a very careful review of these opinions, and well-weighed deductions from his own observations and experience: "I cannot but believe that the mother is much more likely than the father to transmit syphilis to the children, and that, as Mr. Morgan says, the influence of the father has been exaggerated."

Mr. J. B. Thomson, in his papers "On the Comparative Influence of the Male and Female Parent upon the Offspring,"§§ advances the opinion that it is the male chiefly who is concerned in the transmission of hereditary disease. This *opinion*, however, is not supported by facts which warrant us in accepting this view of the matter, and is directly opposed to the deductions from the many cases detailed by Mr. Sedgwick ‖‖ and others cited in this paper.

In hospital practice Dr. Garrod ¶¶ found gout to be hereditary in 50 per cent. of the cases observed, and in private practice the percentage was still higher. He cites a case in which it had been hereditary for upwards of four centuries (probably fifteen generations): the eldest son having been invariably afflicted with the gout when he came into possession of the family estate. Scudamore *** records 522 cases of gout, in 332 of which it was hereditary.

Rheumatism is also subject to hereditary transmission.

The writer knows of a case where a father died of Bright's disease at 56, his son at 35, and another son is threatened with it at the 35th year. Two daughters and three other brothers have not been affected. There

* Allen Thomson. Cyclop. Anat. and Phys., vol. ii., p. 472.

† Stock Manual, 1844, p. 524.

‡ Galenus etiam hujus rei gratia eleganter monet, *infantem plus ex matre quàm à patre habere*, (1) eo quod primum seminis menstruis augeantur, mox his in utero nutriatur fœtus, rursus natus alatur lacte; et quemadmodum quævis stirpes plus ex terra quam parente planta habent, ita infantes plus ex gemitrice."—Apud Jacob Ruffus, De Mulieribus, Lib. i., c. vi. Ext. in Spachius, Gynæciorum, p. 171, 15.

§ On the Comparative Influence of Male and Female Parents on Offspring. Philos. Trans., 1809, p. 393.

(1) Italicized by the writer.

* Idem, p. 395.

† Journ. Royal Agricul. Soc., 1840, vol. i., pt. i., p. 25.

‡ Mémoires de la Soc. de Chir. de Paris, t. iv., 1855; quoted in Br. and For. Med. Chir. Rev., v. xix., pp. 156–8, 1857; also, Archiv. Gén. de Méd., Sept., 1854.

§ Dis. of Eye and Ear in Inherited Syphilis, 8vo, Lond., 1863, p. 208. Archiv. Gen. de Méd., March, 1860.

‖ Med. Times and Gaz., Aug., 1860, pp. 116–17.

¶ Amer. Jour. Syphilog. and Dermat., Jan., 1870, p. 16.

** Pract. Lessons in the Nature and Treatm. of Contag. Dis., Lond., 1872, p. —.

†† Two Lectures on Inherited Syphilis, Philad. Med. Times, 1872; and Pamphlet, pp. 35, 12mo, Philad., 1872, pp. 2.3–4–5–6–7.

‡‡ Edinb. Med. and Surg. Jour., pp. 501–4, 1858–9.

§§ Op. cit., p. 210.

‖‖ The Nature and Treatment of Gout and Rheumatic Gout, p. 251–3, 1859.

¶¶ A Treatise on the Nature and Cure of Gout and Gravel, 4th edit., p. 55, 1823.

*** A Treatise on the Nature and Cure of Gout and Gravel, 4th edit., p. 55, 1823.

is still another case in my mind of a son who inherits the same disease apparently from his father.

When visiting the rooms of the Historical Society of Pennsylvania, my attention was fixed at the first glance on a portrait of one of our revolutionary generals of superior family, that bore such a striking and unmistakable likeness to a young acquaintance of mine that I was anxious to know the relationship, and have recently learned that it was his great-grandfather, and doubly so, for his father and mother were first cousins both of the same name, equally related to the gentleman represented in this portrait.

The strikingly characteristic feature in this family is the marked fulness of the lower eyelid, and arched eyebrows, which were intensified in this young man, because of the double descent through his father and mother. All the males and some of the females in this family die of apoplexy. I have not learned whether the characteristic features in this family are transmitted directly from male to male, or by atavic descent through the females; it certainly continues in the male line.

Dr. Tripe expresses his "belief that male infants are predisposed to disease in a far greater ratio than females, especially during intra-uterine life; that this predisposition, which in extra-uterine life is more marked during the first month, gradually diminishes after the child ceases to obtain its nutrition direct from its mother, and is almost removed shortly after the ordinary age of weaning, viz., at one year and a quarter. From these considerations we infer that the greater mortuary rate of males during the first years of life depends on some influence derived from one or the other or both of its parents, but most probably chiefly, if not entirely, from the mother. . . . . The greater longevity of females certainly points to another vital difference in the sexes; and it may perhaps be true that one cause (greater vitality of the female sex) induces the large differential mortality which we have shown to exist." *

This view is fully confirmed in the author's last paper on the "Relative Viability of the Sexes, particularly with regard to the relative liability to the inheritance of certain transmitted diseases—considered in relation to the selection of Life Insurance risks, with a view of exhibiting the unjustness of the practice of charging higher rates for women;" † also in his paper on "Statistics of Marriages, Births and Deaths in Philadelphia for the 11 years ending 1871." Penn. Monthly, September, 1873.

"There are family diseases, just as there are family likenesses, manners, and peculiarities; and what is remarkable, they are more liable to be communicated by the mother than the father, as if it were her special prerogative to impress her vices, as well as her virtues, upon her descendants." ‡ "Possibly diseases transmissible from either parent will be more likely to be developed in those children who partake most of the *vis insita*, as of the physiognomy of that parent; but we do not know that the observation of our readers will be found to confirm this statement of the author." §

Mr. Sedgwick observes that, "in many cases where the disease is limited in its appearance to one sex, its transmission is restricted to the other. From a careful analysis of a large number of cases, I am at present disposed to think that sexual limitation in the transmission of diseases is more common in females than in males. In several of the cases I have mentioned, where the appearance of the disease has been strictly limited to the males, its transmission has been quite as strictly limited to the female sex, occasioning the phenomenon of *double atavism*, as where neither sons nor daughters ever inherit their father's disease, but only the grandsons in the third and fifth generations, by transmission through the females of the second and fourth generations." * In a note he states that "in the report of a case of hereditary malformation of the hands, affecting ten generations of the same family, it is stated 'that it was the women only who had the misfortune of entailing this defect on their offspring.'" †

"Altogether, the male parent exercises more influence upon the irritability, and the female more on the sensibility. Fabricius is not therefore far from the truth ‡ when he says, that we inherit from our fathers the tastes and cachexies; from our mothers, the spasms, melancholy, vivacity, and intellectual faculties; or Gleichen, § in assuring us that the male determines the bony frame, and the female the eyes. Following Linnæus, in hybrid vegetables: the sexual organs resemble more the mother, the corolla and in general the exterior parts the father. In like manner, following the observations of Senff, gardener of Koenigsberg, the leaves are more like the father than the fruit. Girou says that the mother has more influence upon the plasticity, and the father upon the exterior vitality; ‖ this assertion does not rest on sufficient proofs. We have need of new facts before we can affirm that the mother determines more the viscera, as Vicq d'Azyr pretends having remarked, and that it is she principally who assures the longevity, as Sinclair ¶ contends." **

Cultivators and scientists have frequently called attention to the laws of resemblance which seem to prevail in the production of hybrid plants. Dr. Herbert,†† according to Sedgwick, "established it as a law with respect to amaryllaceous hybrids, 'that they resembled their mother in foliage and stem, or the organs of vegetation; and their father in flower, or organs of reproduction.'" Fries-Morel ‡‡ states that in carnations the hybrids resemble the mother in form and the father in color. According to De Candolle,§§ Gaërtner, Wiegman, and Knight have remarked that many vegetable hybrids have a tendency to return, after a time, to the maternal, but never, as a rule, to the paternal type." ‖‖ The views of Lindley seem to be opposed to those of Dr. Herbert, for he has it that vegetable hybrids resemble the male parent most in foliage and the female most in flower.

"Five or six hundred domestic animals," says Girou, ¶¶ comprising mammifers and birds, which are born annually under my eyes, and my relations with cultivators, who have made the education of beasts the

* British and Foreign Medico-Chir. Review, April, 1857, pp. 469-70. "On the Relative Mortality of Males and Females under five years of age."

† N. Y. Medical Record, June 16 and July 16, 1873, pp. 297-302, and 353-4-5.

‡ Prof. Samuel D. Gross, M.D., LL.D., D.C.L., Oxon. A System of Surgery, etc., in two vols., Phila., 1859 and 1872.

§ British and Foreign Medico-Chir. Rev., vol. xxvii., 1861, p. 382. Review of the above.

* Op. cit., p. 210.

† Edinb. Med. and Surg. Jour., vol. iv., p. 252, 1808.

‡ Resultate naturhistorischer Forschungen, p. 60.

§ Ueber die Saamenthierchen, p. 45.

‖ De la Génération, p. 129.

¶ Principes d'Hygiene, Extraits du code de Santé, Genève, 1823. (?)

** Burdach, Physiologie, v. ii., p. 266.

†† Jour. Horticult. Soc., vol. ii.

‡‡ Ann. de la Soc. d'Hortic. de Paris, p. 112, 1828.

§§ Physiologie Végétale, tome ii., 1862, p. 714.

‖‖ Sedgwick, op. cit., July, 1863, p. 182. See also Sagaret, Considérations sur la Production des Hybrides, etc. Annales des Sci. Natur., tome viii., 1826.

¶¶ Observations sur les ressemblances entre les descendans et leur ascendans. Annales des Sci. Naturelles, t. v., 1825, pp. 40-46.

principal object of their life, have furnished me with frequent occasion to observe the resemblance of fathers and mothers with their products.

"The products of domestic animals resemble, in general, more the father than the mother, by the head, the members, the color, the character, in a word, by all that which belongs to the exterior life; nevertheless, under the same relations, the female, more than the male, resembles the father, and the male, more than the female, resembles the mother. The same products resemble in general also more to the mother than to the father, by the height, the length of the hair, the dimensions of the pelvis, finally by all that which is under the influence of the exterior life, or of nutrition; but under these relations the male, more than the female, resembles the father, and the female, more than the male, resembles the mother.

"The fœtus often resembles, by the exterior life, the paternal grandfather; and under the same relation, the daughter sometimes resembles the maternal grandmother; even when the father resembles his proper mother, and the mother her proper father.

"I have never seen a resemblance to the paternal grandfather in the grandsons, nor to the maternal grandfather in the granddaughters, when the father does not resemble his proper mother, or the mother her proper father.

"At some period after the epoch of birth, the sons who resemble from the first their mother, and the daughters who resemble their father, acquire sometimes from the resemblance, the one with her father and the other with his mother; that metamorphosis is more frequent and more pronounced in the sons than in the daughters.

"The sons never pass from the resemblance of the father to that of the mother, nor the daughters from the resemblance with the mother to that of the father.

"Several naturalists have recognized the general influence of the father on the exterior life and the mother on the interior life. In speaking of mules, Vicq d'Azyr said: 'It seems that the exterior and the extremities are modified by the father, and that the entrails are the emanation of the mother.'

"The chasseurs have adopted the proverb, *Chien de chienne et chienne de chien*, to express the fact that they find the qualities of the mothers in the sons, and those of the fathers in the daughters.

"A hunting bitch with a double nose, the issue of a father with a double nose and mother with the usual form of nose, was fecundated by a common dog, and of eight young, of the same pregnancy, four were males with double noses, and four females with a common nose.

"Of four colts by an Arabian mare, three males had the hair of their mother, and one female that of the father.

"As far as the size or stature of the offspring is concerned, it seems to be pretty well ascertained by facts known to the breeders of cattle and horses, that this depends in a great measure on the mother." *

According to Mr. Thos. Andrew Knight, an intelligent gentleman, who gave much time to experiments in connection with the breeding of cattle, we are told that "in viviparous animals the size of the fœtus is affected by the influence of the male parent, and in some instances not inconsiderably; but the size and form of the eggs of birds do not appear to be in any degree changed or modified by the influence of the male; and therefore the size of the offspring at birth must be regulated wholly by the female parent." *

In multiparous animals it is often observed that the influence of one parent preponderates in a part of the progeny, and of the other in another part of it. Thus it happens when a pointer and a setter breed together, it is not unusual to find part of the whelps almost perfect pointers, and the remainder as nearly true setters.† It being a fact, then, that brothers and sisters of the same pregnancy in multiparous animals do not resemble one another, it is not at all strange that products of uniparous animals, born at distant periods, should so frequently be dissimilar.

"It has long been a prevalent idea," says Carpenter,‡ "that certain parts of the organism of the offspring are derived from the male, and certain other parts from the female parent; and although no universal rule can be laid down upon this point, yet the independent observations which have been made by numerous practical 'breeders' of domestic animals (both mammals and birds) seem to establish that such a *tendency* has a real existence; the characters of the *animal* portion of the fabric being especially (but not exclusively) derived from the *male* parent, and those of the *organic* apparatus being in like manner derived from the *female* parent. The former will be chiefly manifested in the external appearance, in the general configuration of the head and limbs, in the organs of the senses (including the skin), and in the locomotive apparatus; whilst the latter show themselves in the size of the body (which is primarily determined by the viscera contained in the trunk), and in the mode in which the vital functions are performed. Thus the *mule*, which is the produce of the male ass and the mare, is essentially a *modified ass*, having the general configuration of its sire (slightly varied by equine peculiarities), but having the rounder trunk and larger size of its dam; on the other hand, the *hinny*, which is the offspring of the stallion and the she-ass, is essentially a *modified horse*, having the general configuration of the horse (though with a slight admixture of asinine features), but being a much smaller animal than its sire, and thus approaching its dam in size, as well as in the comparative narrowness of its trunk."

The same distinguished authority cites "a case in which a setter-bitch, having been 'lined' by a pointer, bore three pups; two of these (one a male) seemed exclusively to resemble the father, appearing to be perfect pointers in configuration, and growing up with the habits of that race; whilst the third (a female) seemed equally to resemble its mother, being apparently a true setter both in structure and instinct. Yet, notwithstanding this apparent restriction, it subsequently appeared that the pointer-pups must have something of the setter in their constitution, and the setter-pups something of the pointer. For one of the pointer-pups (a male) having been matched at the proper age with a pointer-bitch of pure breed, one of the pups borne by the latter was a *true setter*, exactly resembling its paternal grandmother, and another was *setter-marked*; and the setter-pup (a female) having been lined by a setter-dog of pure breed, there were among its litter of pups two *pointers* resembling their maternal grandfather. The same variety presents itself to even a greater degree in the human species. . .

"One of the most remarkable cases of this kind known to the author, is that of two sisters who seem to resemble each other in no one point of

* Studies in Physiology and Medicine, by R. J. Graves, Lond., 1863, p. 157.

* Philosoph. Trans., 1809, p. 398.
† Quarterly Journal of Royal Agricultural Soc., vol. i.
‡ Physiology, p. 785.

configuration or mental character; but of whom one bears a most striking resemblance, both in person and in mind, to her father; whilst the other no less strikingly resembles her mother. The only peculiarities which at all indicate their relationship are a gouty diathesis which they both inherit from their father, and an idiosynerasy in regard to opium, of which neither is able to take even a small dose (in any form whatever) without violent vomiting." *

Mr. Orton † "refers to Mr. Bakewell's Dishley sheep, as deriving and maintaining their celebrity through the ewes. And he adduces an observation which, if well founded, is of great pathological importance, and of especial interest to members of the medical profession, as well as to the directors of associations for life insurance. It is this: that diseases of the vital organs (and it may be presumed, therefore, diseases primarily involving the vital functions of nutrition and secretion) are transmitted oftener, and in a more intense form and degree, on the side of the mother than that of the father. And he adds that, in the matter of life insurance, he has long been in the habit of judging of the value of a life by the family history on the female (mother's) side.‡ In perfect accordance with this position, and, if well founded, in their degree confirmatory of it, two observations may be cited: the *first*, that the daughters of a woman who has herself borne a large family, are often equally prolific as their mother, a fact, if it be one, not without interest to those to whom an heir-male of their own body is an object; the second, that the daughters of mothers that have borne twins oftener than other females give birth to twins.

"In connection with this branch of his subject, Mr. Orton draws a distinction between a part or organ, including its vital endowments, and the *quality* of the organ and its endowments. And while maintaining that the 'outer' structures are chiefly furnished by the male parent, he equally holds that the *quality* of these, as of all the organs, comes mainly from the female. By quality, he obviously means what the older physiologists included under the term *vis vitæ*, or what in ordinary language is called *stamina*. It is not, for example, the special endowments of the nervous and muscular systems, the powers of contractility and nervous agency, considered *per se*, which he says are given by the female, but the quality of these is now defined and may be good or bad. This allegation he illustrates by a reference to the 'short-horns,' and Mr. Bakewell's breed of sheep. But it will perhaps be best understood by a reference to the horse. 'The Arab,' he says, 'will let you have his stallion, but his mare at no price. He cultivates *endurance* and *bottom*, and the female gives them. He does not know the law we are promulgating; but he acts as if he did, for experience has taught him. The English breeder, on the other hand, values the stallion. He cultivates *speed*, and finds that the sire gives the locomotive organs; consequently his value, just the reverse of the Arab; his mare is easily got at, but his stallion is priceless.'"

Dr. Harvey,§ declining to give an opinion regarding it (Mr. Orton's theory), says: "It may be remarked in passing, that while *talent* is notoriously in the male line, it has often been observed of individuals that have risen to distinction among their fellow-men, either by their *power* of intellect or *force* of character, that they have owed their pre-eminence to their mother."

According to Dr. Harvey,* "Mr. Orton's argument is, that in the reproduction of the animal species there is no casual blending of the parts and qualities of the two parents, but that each parent contributes to the formation of certain structures, and to the development of certain qualities. And, advancing a step further, he maintains that the male parent chiefly determines the external character, the general appearance, in fact, the outward structures and locomotive powers of the offspring (*e.g.*, the brain, nerves, organs of sense, and skin, and likewise the bones and muscles, more particularly of the limbs), while the female parent chiefly determines the internal structures and the general size and quality, mainly furnishing the vital organs (*e.g.*, the heart, lungs, glands, and digestive organs), and giving tone and character to the vital functions of growth, nutrition, and secretion."

This, then, is the law which Mr. Orton, of Sunderland (a practical breeder of animals), claims to have worked out by independent observation, though he accredits the discovery to the late Mr. Alexander Walker.†

"It is an error to suppose that the male transmits certain characters and the female other characters; though, no doubt, from unknown causes, one sex sometimes has a stronger power of transmission than the other, ... for certainly they (the sexual elements) do not in ordinary cases differ in their power of giving character to the embryo."‡

Concerning the cause of the exterior or animal life following that of the father, and the interior or vegetative resembling that of the mother, the following may serve to explain:

"While the fœtus is developed from that part of the ovum called by physiologists the *germinal* membrane, this membrane itself consists of *two* layers, an outer and an inner, called respectively the *serous* and the *mucous*. Of these layers, each gives origin to a special set or system of organs; the outer (or serous) to the brain, nerves, organs of sense, and integuments, and likewise to the bones and muscles; the inner (or mucous) to the lungs, glands, digestive organs, etc.

"That is to say, the outer layer gives rise to the whole set of organs concerned in the strictly *animal* functions, while the inner layer gives origin to those concerned in the strictly *vital* functions."§

The heart and blood-vessels, according to this authority, "would appear to be either the joint production of the two layers or to originate in an intermediate layer subsequently developed and called the *vascular* layer. He suggests, however, that the vascular system may stand in the same subordinate relation to the vital organs and their functions as the osseous system does to the muscular.

The fact of the father influencing most the exterior organs, and the mother most the interior, is ascribed to the discoveries of Bischoff, Wagner, and Newport, that the spermatozoa do not appear to penetrate be-

* Op. cit., p. 785.

† Dr. Harvey's review of Mr. Orton's paper on the "Physiology of Breeding" (Newcastle Chronicle, March 10, 1854), in Edinb. Med. Jour., August, 1854, pp. 113–4.

‡ I have interpolated the word mother's, because I believe it makes the meaning of the author more explicit. He probably refers to the examination of *men*, who, according to the views advanced in this paper, resemble their mothers more than their fathers. But if he were examining women, it is probable that he would pay more attention to the father's side.

§ Op. cit., p. 114.

* Alexander Harvey, M.D., "On the Relative Influence of the Male and Female Parents in the Reproduction of the Animal Species." Edinburgh Monthly Medical Journal, August, 1854. Review of Mr. Orton's article on the "Physiology of Breeding," in Newcastle Chronicle of March 10, 1854.

† Intermarriage, etc. Lond. and Phila., 8vo.

‡ Darwin, An. and Pl., vol. ii., p. 360.

§ Alexander Harvey, M.D., "On the Relative Influence of Male and Female Parents, etc." Edin. Med. Jour., August, 1854, pp. 115–6.

yond the *exterior* layer of the germinal membranes from which the exterior organs take their origin. Dr. Harvey says: "As the spermatozoon comes first into contact with the *exterior* of the ovum and disappears while lying there, it seems not unreasonable to suppose that its influence while extending to the outer layer may be in a great measure confined to it."

Dr. Mapother explains this phenomenon in much the same way. According to this authority "the influence of the male has been said to bear more upon the apparatus of animal life, as the spermatozoa do not probably reach deeper in the ovum than the serous layer of the germinal membrane, while the mother is more apt to share peculiarities in the organs of vegetative life." *

THE PHYSICAL EXAMINATION.

By a Medical Director.

The selection of lives for insurance may very properly be called an art, and therefore as such it is capable of cultivation and development. Looking at the question in the abstract, apart from all the hindrances which a dangerous spirit of rivalry has woven round it, it is evident that this art can only be acquired in a high degree by men of broad professional culture and experience, of decided integrity and firmness of character, and of keen insight into the dark and crooked ways of human character. Men that combine all these qualities are indeed rare. How very few there are, for instance, who can justly claim a satisfactory knowledge of even one of the things required, viz., auscultation and percussion! And yet, next to integrity, this knowledge is the gift most to be desired in a medical examiner for life insurance.

We have already spoken, in a previous number, of the careful manner in which the physician should sift the personal and family history of every applicant. The purpose of the present article is to say a few words in relation to the physical examination. We do not propose to set forth in writing how this should be done, for we assume that the examiner is already familiar with the subject. If he is not, we certainly cannot enlighten him by anything that we might write upon this topic, for it is pre-eminently a branch of science to be learned by actual observation and not from books. Our chief object is to discuss certain features of the subject from a life-insurance stand-point.

In conducting the physical examination of an applicant for life insurance the question presents itself, how thorough should this be? In private practice, if a man comes to you to have his chest examined, you request him to strip to the waist, and then percuss and auscultate every portion of the chest. Common sense would say that an examiner for life insurance should do the same thing; but we would ask, in all frankness, how often is this done? Very rarely, indeed, if the truth were but known. Now it is undoubtedly a fact that the time when a man is most likely to apply for insurance on his life is immediately after the manifestation of some symptom pointing, as he believes, to the development of a fatal disease. My family is unprovided for, he says to himself, and I must hasten to insure my life before the disease shall have progressed so far as to be readily recognized by the company's physician.

The writer was once present at the bedside of a friend who had but a few hours previously had a slight hemorrhage from the lungs. His physician, whose skill in auscultation and percussion was exceptional, instituted a careful examination, but was unable to find any dulness on percussion or any abnormal sounds except near the base of one lung, posteriorly. The pulse was but little accelerated, there was no appreciable heat of skin, no noticeable emaciation, and but little cough, except during excitement or after walking. If this man had chosen to give false answers to the questions put to him, I think there can be very little doubt that with the prevailing mode of examination he would have been accepted by almost any company to which he might have applied for a policy of insurance on his life.

The reader, unless he happen to be familiar with the ins and outs of the business, will very naturally draw the inference that there is a widespread negligence among the physicians of the different life companies. There is undoubtedly some truth in this inference, as every examiner will readily admit, but at the same time the larger portion of the blame lies with the executive officers. In the abstract they are supposed to instruct their physicians to employ every resource known to the art of medicine for the detection of the first beginnings of disease; in reality, however, they throw cold water upon every attempt to make anything but the most superficial physical examination. Here are the reasons given in justification of such a course: The applicant takes out a policy to please the agent, who is at the same time a personal friend. He must therefore be examined at his place of business, with the least possible loss of time and personal inconvenience. If the examiner were to insist that the man should come to his private office, or to the office of the company, and there be stripped to his waist, as if before a pension examiner, it is more than probable that the lukewarm applicant would not insure his life, or —worse still—that he would insure it in a rival company.

So eager is the competition for new business that not a single company has had the boldness to establish rules that would in a very great measure prevent all this. We are not sure how such a plan would work in the country, but in the larger cities it certainly would be to the advantage of the companies if they would establish the rule that all applicants must be examined at the office of the company or at the private office of the examiner. It would also from time to time save the companies a premature loss, if they would require at least a partial examination of the urine of all applicants who have passed the age of 40. The simple test by heat and nitric acid—though not a perfect one—would nevertheless suffice. It certainly is within the reach of all physicians, and requires but a few minutes' time.

One of the New England companies, if we are correctly informed, has put a rule of this kind into practice. It would be interesting to know how far they have found it practicable to enforce it, and also whether instances have occurred where applicants, who presented all the appearances of health, have been found by this test to have some affection of the kidneys.

Reforms of this kind could very easily be introduced if the more influential companies would act as a unit in the matter. The agents, from whom the chief opposition is to be expected, would then be compelled to acquiesce in the new order of things, and all the companies would in an equal degree enjoy the benefits of the greater protection.

* Physiology, p. 375.

ANNOYANCES OF MEDICAL LIFE INSURANCE EXAMINERS.

By WALTER B. CHASE, M.D.,

WINDHAM CENTRE, N. Y.

PROBABLY most physicians called upon to act as examining surgeons for Life-Insurance companies (removed from the home office of the company) have been annoyed by the officiousness, not to say the impudence, of Life-Insurance agents. The great question with certain of these agents, after a party has made a formal application for insurance, is, how they can secure a favorable certificate of examination from the medical examiner. If, after the examination is completed, the agent finds statements in the certificate calculated to impair the applicant's prospect for a policy, he at once sets himself to work to have such modifications made in the certificate as will overcome these objections.

Failing here, as he will with examiners who recognize and regard their responsibility, what assurance has the surgeon that the agent will not make such changes in the certificate as will deceive the company and render the examination not only of no value, but of positive harm, and at the same time abolish the very vital relation the surgeon is supposed to sustain to the company, viz., that of confidential adviser.

I ask, what assurance has either the company or the examiner that this very thing will not be accomplished?

Out of the half-dozen Life-Insurance Companies, for which I have acted as medical examiner, with but a single exception the certificate has at once passed into the hands of the agent to be forwarded to the home office.

To illustrate one of these annoyances, the following is an example: Several years since an agent of a prominent New England Life-Insurance Company called at my office with a young man who had given him an application for life insurance, desiring me to make the examination. The agent, at one time a clergyman, proposed that he should sit by the desk and record my examination as I should dictate it to him. This I declined to do. Not finding the certificate altogether suited to his purpose or fancy, he quite insisted on my making certain modifications in my statements concerning the applicant's condition. It is perhaps unnecessary to state in this connection that our parting was of such a nature that he never again requested my services, though he continued to receive applications for insurance in our town.

I would not wish it inferred that Life-Insurance agents are generally dishonorable men; on the contrary, I have in mind those who I know would not willingly be accessory to securing a policy through false representations or upon an unsound life.

For reasons of a professional nature the common method of delivering certificates of examination to Life Insurance agents direct is open to serious objections. In the event the examiner, in the discharge of an imperative duty, rejects the party as unsound or not entitled to a policy, the agent informs the applicant as to the cause of his not receiving a policy, and throws the whole responsibility upon the examiner, when justice to the examiner requires that neither the agent nor applicant should be allowed the privilege of knowing whether this responsibility rested with the surgeon or the company.

For prudential reasons, which will suggest themselves to any mind, pension examining surgeons are instructed to transmit their certificates of examination to the Pension Office under seal, without allowing the applicant any knowledge as to their import. I would therefore suggest that Life-Insurance companies have their medical examiners transmit directly to the home office their certificates of examination, both as a means of safety to themselves and as embodying a plan by which the medical examiner will be relieved from a possible and in some instances a real cause of annoyance.

Another cause of annoyance is found in the subject of "certificates of family physicians." This, however, has been most ably discussed and placed in its true ethical bearings in a late article, appearing in this journal, by Dr. Wey, of Elmira.

ON THE RELATION OF MEDICAL EXAMINERS TO LIFE-INSURANCE AGENTS.

By S. S. HERRICK, M.D.,

NEW ORLEANS.

THERE are some points in this subject which I have not seen treated in the literature of Life Insurance, and the importance of which I am sure is not duly appreciated by managers in general. While intelligent people fully understand the value of an independent judiciary, as a branch of government, and deplore that plan of selection which subjects judges to the debasing influences and conditions inseparable from party politics, Life-Insurance companies seem insensible to the danger that improper considerations may be presented to the minds of their medical examiners. This is surprising, considering the just importance attached to a due examination of applicants and the fact that this is in its nature judicial. In the body politic there is a crying want for an independent judiciary, and it is evident to my mind that complete independence on the part of medical examiners is quite as much a desideratum.

In too many instances the selection of the examiners is made by the local agent, and the result of the examination is usually open to his inspection. The agent receives commissions on the policies and annual payments, and is interested in securing the largest possible number of risks. It is natural that he should desire the medical examination to be as favorable as possible to his individual advantage, and the easy examiner is always sure to have his preference. Under this system the medical examiner finds his pecuniary interest in propitiating the agent, whom he finds a nearer, if not a better, friend than the distant managers at the home office.

However high an opinion we may set upon the moral advantages of a medical education, physicians are human to the last, and may not claim insensibility to a pecuniary argument. In common with the balance of mankind, we are enjoined to pray (not to prey) for our daily bread, and we ask not to be led into temptation. In a moral point of view the insurance companies do wrong in allowing their medical examiners thus to be tempted; and, like all other wrongs, in the long run, it is bad policy.

But, aside from corrupt pecuniary considerations, there is abundant room for injurious bias upon the judgment of the medical examiner. The agent is naturally inclined to give a lucrative appointment to his own physician, who may be on terms of intimacy or close relationship. A sense of obligation is ever present to the physician's mind, which is a colored medium to his scientific view and must perpetually embarrass, if not mislead, his judgment. Moreover, there are in this city conspicuous examples of physicians' signs at the doors of Life-Insurance offices.

Taken in the abstract, hospitality is undoubtedly a noble trait, and gratitude in a guest quite natural and commendable: but in the concrete it can readily be seen how costly the exercise of these virtues may be to other parties.

The obvious remedy for this abuse is to take away the appointment of medical examiners from the local agent, to bring all applicants before some duly appointed examiner of the company, and to report the result of the medical examination directly to the home office, without the inspection of the local agent. Let the examiner understand that he is responsible directly and solely to the central office, and let the agent be instructed that any interference or inquiry concerning the physician's report is an unwarrantable impertinence.

Such a plan, I am convinced, would prevent the acceptance of many doubtful and many improper risks; and by obviating undue losses, lighten the rates of insurance and thereby extend the benefits of an humane system to a large class who are now unable to bear its expense.

MEDICAL EXAMINERS SHOULD FORWARD THEIR CERTIFICATES TO THE HOME OFFICE.

By R. W. ERWIN, M.D.,

ATHENS, OHIO.

In addition to the suggestions on the examination of applicants for life assurance in recent issues of the RECORD, one other subject should be considered. I have had some experience as an examiner for different companies, and invariably the agent has taken my certificate and forwarded it to the company. This is wrong, for two reasons: 1st. He has no right to the secret history of the applicant, and a knowledge of his ailments, if there should be any.

2d. The certificate being in his possession is seen and read in nearly every instance by the applicant. If the latter is a patient of the examiner a fair statement of the risk may excite feelings of enmity against the physician, and he, to protect himself, signs a recommendation. This is more likely to be done in doubtful cases. It is true the acceptance of the office of examiner makes the obligation to the company's interest above that of self, but every one knows there are many who will not so value it, and why permit a measure, which does no good, to become a source of evil? Again, the opportunity is afforded the agent, by possession of the paper, to alter the certificate and correct a bad risk into a good one. There are not many who would do such a thing, yet straitened circumstances would make it a temptation to unscrupulous persons. The certificate of the physician ought to be confidential matter, known only to the officers of the company who grant or decline the policy. When the applicant is presented for examination the agent should be dismissed, and the certificate of examination sent directly to the office by the physician. Such a course would relieve the examiner of much embarrassment and in some cases insure against unfavorable risks. There should be three blank papers, one for the statement of the person wishing insurance; one for that of his physician, so long as companies continue the practice of taking the physician's statement; and a third blank for the examiner. The blanks that are used now will do, if the agents are instructed to get the applicant's and physician's statement *first*, and then place it in the hands of the examiner.

Miscellaneous.

BAD LIFE RISKS. Testimony from every quarter, and testimony of the most reliable kind, is constantly accumulating to the effect that our life-insurance companies are more and more frequently imposed upon by unsound and unsafe lives. The facilities for doing this are not wanting. The most alert and vigilant caution at the home office cannot detect deliberate fraud and perjury a thousand miles away. If a man is resolved to effect an insurance upon his life, and is willing, for the sake of so doing, to lie with a moderate degree of skill and persistency, the thing is not difficult of accomplishment. It is true that the medical examination is in the way. But aside from the fact that there are many diseases which can only be detected by the most experienced eyes and which will not be mistrusted or sought after unless indicated by the answers to the questions of the application, it must be remembered that a large majority of our medical examiners are necessarily the personal friends, and often the family physicians, of the applicants, and that with our estimable brethren of the lancet and the Latin, as with the best of us all, considerations of personal friendship are not without their weight and potency. We do not mean to say that the profession is venal; but we do mean to say that, between a village Galen, anxious to conciliate patronage, and a designing applicant, willing to commit fraud, a life-insurance company stands a poor chance of ascertaining the truth respecting the risk it is invited to assume.—*New York Ins. Chronicle.*

STATISTICS OF SUICIDE. The statistics of 1870 show an increasing tendency to suicide throughout the country. The percentage was 3.06 per hundred thousand. In 1860, it was 3.02, and in 1850, 2.01. Now it occurs to us that a comparison of these ratios, with the percentage of suicides occurring in our life companies, would go a good way towards settling the bearings of the suicide clause.

If the proportion of suicides bears no heavier on the insured than on the country at large, it is a pretty strong argument in favor of those who hold that no man in his right mind will destroy his life for the sake of the insurance. But if, as we are inclined to suspect, cases of self-murder are excessive among this class, the companies ought,—in the interests of society, as well as their own—to take away all mercenary motives to the crime.

As usual, the male sex greatly predominates among the victims; more than three-fourths are men. Suicide is rare among women who have reached maturity; the majority of the cases are confined to the romantic period of girlhood. Men, on the contrary, resort to this extreme remedy in numbers increasing with age. Ten suicides occur among the whites, to one among the blacks. The cheerful, contented disposition of the latter shows where lies the exciting cause of suicide. It is the product, not of mental rust, but of wear and tear. The rate is higher in the bustling communities of the North than in the more quiet South.

But the German and French minds, of all others, appear to be particularly prone to the disease. These nationalities stand nearly as three to one in the percentage of suicides, compared with the Irish, and four to one compared with the native Americans. The depressing effect of forsaking home and country is exhibited in the heavy ratio among all classes of our foreign population.—*Insurance Monitor.*

TABULAR VIEW OF THE PATHOLOGICAL ANATOMY OF YELLOW FEVER AND MALARIAL FEVER.

By JOSEPH JONES, M.D.,

PROFESSOR OF CHEMISTRY AND CLINICAL MEDICINE, MEDICAL DEPARTMENT UNIVERSITY OF LOUISIANA; VISITING PHYSICIAN OF CHARITY HOSPITAL, NEW ORLEANS.

The following comparison of the Pathological Anatomy of Yellow and Malarial Paroxysmal Fevers contains the general outline of the results which I have obtained by investigations conducted in various parts of the Southern States, and which were commenced in 1856. I have, upon several occasions, embraced opportunities of examining the bodies of those who had died from yellow fever and malarial fever, at the same time, as they lay side by side in the *Dead House*. Such examinations served to establish more fully the results of numerous post-mortem examinations of the subjects of each disease.

YELLOW FEVER.

Exterior.—Generally full and not reduced in flesh; features may even present a swollen, bloated aspect. Skin of face and upper portions of trunk of a golden yellow color. Dependent portions of body of a mottled purplish and yellow ecchymosed appearance. Black vomit frequently oozes from corners of the mouth, and trickles down the face and neck. When the muscles are cut a large quantity of dark blood escapes, which upon exposure to the atmosphere changes to a bright scarlet hue. Putrefactive changes take place rapidly after death. In some cases of yellow fever, especially when the functions of the kidneys have been arrested for some time before death, the putrefactive changes take place with great rapidity and energy, and sometimes even appear to commence before death, the body exhaling a disagreeable odor.

Cerebro-spinal Nervous System—Sympathetic Nervous System.—The post-mortem examinations of the brain, spinal cord, and sympathetic system have thus far revealed no characteristic lesions to which the aberrated nervous symptoms of yellow fever can be referred. Beyond congestion of the capillaries of the cerebro-spinal and sympathetic systems, which congestion appeared to be referable to the same cause as that producing capillary congestion in the internal organs, I have observed no structural lesion, as fibrinous effusion, hemorrhage, or softening of the cerebro-spinal and sympathetic nervous structures. Chemical analysis revealed the presence of urea, bile, and leucine in the brain, and to the effects of these substances, as well as to the direct action of the yellow-fever poison, must be referred the aberration of intellect, the restlessness, convulsions, and coma.

Heart.—Pale yellow and brownish yellow, as if undergoing fatty degeneration; structures of heart flabby and somewhat softened; numerous oil-globules deposited within and around the muscular fibrillæ of the heart. Cavities of the heart, in many cases, filled with dark fluid blood; yellow fibrinous clots sometimes present. Blood contains abnormal amounts of urea and extractive matters and ammonia. Fibrine of blood greatly diminished in amount.

MALARIAL FEVER.

Exterior.—The general appearance of those who die from the effects of malarial fever will depend upon the nature and length of time and the effects of the disease. When stout healthy men are suddenly destroyed by pernicious malarial fever, the body may present the fulness of health; and in such cases the superior portions of the body may, as in yellow fever, present a golden yellow color, whilst the dependent portions present a purplish and mottled appearance. The jaundice and mottling of the skin, however, is, as a general rule, present to a less degree than in yellow fever. In cases of protracted bilious fever, the body is frequently greatly emaciated. In chronic malarial poisoning, attended with enlargement of the spleen and cirrhosis of the liver, the belly and body and limbs generally are distended with dropsical effusion. The cut surface of the muscles presents a purplish hue, and the change to the arterial hue, upon exposure to the atmosphere, is much slower and less perfect than in yellow fever.

Cerebro-spinal Nervous System—Sympathetic Nervous System.—As far as my observations have extended in malarial fever, the dura mater was always normal; the arachnoid membrane pearl-colored, opalescent in some cases, in others perfectly transparent and normal in appearance; the blood-vessels of the pia mater congested with blood, but always without marks of inflammation. Subarachnoid fluid in almost all cases clear, transparent, and in some cases of a golden color; the amount varied in different cases, sometimes exceeding, but most generally falling short of, the usual amount. Blood-vessels of the brain generally filled with blood. The structures of the brain appeared, in acute cases, as a general rule, to be unaltered either in structure or appearance; in chronic cases the nervous structures sometimes presented a deeper and more grayish color, from the presence of pigment granules.

The structures of the brain and spinal cord, in malarial fever, were therefore, as a general rule, altered neither in consistence nor appearance, and the same is true also with reference to the sympathetic nervous system.

Heart.—Normal in color, presents the deep purplish red muscular appearance of the healthy heart. Muscular fibres of the heart firm and of normal appearance under the microscope. No deposits of oil in the muscular structures.

Cavities of the heart frequently distended with dark blood. Firm laminated, fibrinous concretions very common; and in some cases of pernicious fever, the formation of these heart-clots during the cold stage without doubt causes death, and renders unavailing the action of remedial agents.

The fibrinous concretions are not only attached to the carneæ columnæ and chordæ tendineæ, and auriculo-

YELLOW FEVER.

LUNGS.—Dependent portions greatly congested; otherwise normal. In some cases circumscribed effusions of blood in textures of lungs.

STOMACH.—Mucous membrane of stomach in many cases intensely congested, softened, and eroded. Stomach often contains large quantities of black vomit. Reaction of black vomit often *alkaline* from the presence of *ammonia*, resulting from the decomposition of *urea*, eliminated by the gastro-intestinal mucous membrane. *Ammonia* and *urea* present in the black vomit ejected during life, and also when examined almost immediately after death. The presence of ammonia in the stomach and black vomit was not the result of post-mortem putrefactive changes. In many cases ammonia was present in such large amount, that when a rod, dipped in hydrochloric acid, was held over the mucous membrane of the stomach, or over the black vomit, dense fumes of chloride of ammonium were formed, as if the rod had been held over a bottle containing liquor ammoniæ. Chemical analysis revealed the presence of ammonia and also of urea in the black vomit. Under the microscope the black vomit was seen to contain colored blood-corpuscles, and cells of the mucous membrane of the stomach, and broken capillaries. In some cases vibriones and fungi were numerous in the black vomit; in others they were absent.

INTESTINES.—As a general rule dark-colored and distended with gas. In some cases the reaction of the intestinal contents was strongly alkaline from the presence of ammonia.

LIVER.—Yellow color and bloodless, resembling this organ in fatty degeneration, but firmer and denser in structure. Under the microscope, textures of the liver infiltrated with oil; secretory cells of liver contain much oil. The liver of uncomplicated yellow fever, as far as my observations extend, and according to the observations of Louis and many others, is of a bright yellow color. It is probable that this color, as in the case of the malarial liver, varies with the length of the attack and the effects of previous diseases. Thus Dr. Samuel Jackson, of Philadelphia, found the livers of those who had died in the early stages en-

MALARIAL FEVER.

ventricular valves, but they also frequently send forth long branches into the pulmonary arteries. The formation of these concretions is rare in yellow fever, and when formed they are much smaller and softer than in malarial fever. The blood of malarial fever contains more fibrin, fewer colored corpuscles, and changes more slowly to the arterial hue, upon exposure to the atmosphere, than the blood of yellow fever.

LUNGS.—Dependent portions congested with blood; otherwise healthy.

STOMACH.—Mucous membrane often presents a normal appearance; sometimes ecchymosed; rarely inflamed or softened; sometimes discolored with bile; rarely contains black vomit (altered blood). Reaction of mucous membrane of stomach and intestines acid. The pathological alterations of the stomach, observed after death, do not correspond, as a general rule, with the severity of the symptoms, the vomiting and pain on pressure during the progress of the fever. The injection of the blood-vessels, and the mottled, purplish-brownish red color, after death, appear to be indicative, not of inflammation, but rather of stagnation and accumulation of the blood in the capillaries, consequent upon the disturbance of the relations of the blood to the capillaries. The distressing vomiting, so often a troublesome symptom in malarial fever, appears to depend upon the contact of the altered bile and the irritation of the nervous centres, which supply the stomach with nervous force, by the altered blood and by the malarial poison.

In cases where there has been chronic inflammation of the stomach before the appearance of the fever, and in cases of long standing, where the solids and fluids were permanently altered, decided lesions of structure were found in the stomach. It may be asserted, however, that there is no constant or characteristic lesion of the stomach in malarial fever.

These remarks apply also to the SMALL INTESTINES. The mucous membrane frequently presented a purplish, irregularly injected, mottled appearance, especially after the administration of purgatives, and it was frequently observed that the injection of the blood-vessels was greatest in the dependent portions of the intestines. In several cases Brunner's glands in the duodenum were enlarged and distinct. The solitary glands of the small intestines appeared in many cases enlarged and distinct. Peyer's glands were uniformly free from any well-marked morbid alteration. In some cases they were distinct and well defined in their outline, and presented a honey-comb surface, dotted with dark points; but they were always free from marks of inflammation and even of irritation, and in their pale, white color contrasted strongly with the surrounding mucous membrane, discolored with bile and often irregularly injected with blood.

LIVER.—The weight of the liver is increased in malarial fever above the standard of health. This increase of weight is due in part to the stagnation and accumulation of blood in the capillaries and blood-vessels, and to the deposit of pigment matter in the structures of the liver. This observation applies to the liver in the acute stages.

In all the different forms of malarial fever, intermittent, remittent, and congestive, which had continued longer than five days, and in which there had been no previous alterations of the structures, as in cirrhosis and fatty degeneration, I found the ex-

YELLOW FEVER.

gorged with blood. The decoction of the yellow-fever liver is of a golden yellow color, whilst that of the malarial liver is of a brownish yellow color. The golden yellow color of the yellow-fever liver can be extracted both by alcohol and water. The yellow-fever liver is firmer and harder than that of malarial fever, contains much less blood, and is much less readily acted upon by liquor potassæ and acids. Liquor potassæ readily dissolves the malarial-fever liver, and the decoction presents the appearance of venous blood, while no such effect is produced by the action of this alkaline solution upon the yellow-fever liver.

Chemical analysis reveals the presence of urea and fat in abnormal amounts; animal starch and grape sugar are also present in the yellow-fever liver. As a general rule grape-sugar is absent from the malarial liver.

GALL BLADDER.—The gall bladder in yellow fever is, as a general rule, contracted, flaccid, small, and contains little or no bile. The amount of bile generally does not exceed 100 grains. In malarial fever, on the other hand, the gall bladder is, as a general rule, distended with dark, greenish, black bile. In yellow fever the vomiting is rarely bilious, unless in the commencement of the disease; and the black vomit contains little or no biliary matter.

The small intestines are rarely if ever discolored by bile in yellow fever, whilst in malarial fever it is common to find the gastro-intestinal mucous membrane discolored by bile.

SPLEEN.—As a general rule but slightly enlarged. In many cases normal in size and appearance. In many cases of yellow fever the spleen is neither enlarged nor softened, nor altered in appearance, either upon the exterior or within. There appears to be no special alteration or destruction of the colored corpuscles in the spleen of yellow fever as in that of malarial fever. The enlargement of the spleen in fevers does not, from these observations, depend upon the diminution of the fibrin, because this element of the blood is diminished to a much greater extent in yellow fever than in malarial fever, and at the same time the spleen is enlarged to a great and marked degree in the latter. Another fact worthy of consideration in this connection is, that in yellow fever the colored blood-corpuscles are not specially diminished in amount, whilst in malarial fever they are rapidly destroyed, and this destruction appears to be greatest in the liver and spleen. In malarial fever both these organs are loaded with the altered blood-corpuscles and with the pigment granules resulting from the alterations of the colored corpuscles, whilst neither the spleen nor the liver in yellow fever affords any evidence of alterations of the colored blood-corpuscles.

MALARIAL FEVER.

terior of a slate color, and the interior of a bronze color. In that form of cirrhosis of the liver which is directly induced by the prolonged action of the malarial poison, the liver is in like manner of a slate color upon the exterior, and olive green within, and loaded with dark pigment granules. The change in the color appears to be very persistent, and in several cases I have observed the liver to retain shades of light slate and light bronze several weeks, and even months, after the relief of the attack of malarial fever, the patients having been destroyed by other diseases or by violence. The liver, especially in the peripheral portions of the lobules, contains pigment granules, resulting from the alteration of the colored blood-corpuscles and the hæmatin. The pigment granules are frequently distributed uniformly through both the portal and hepatic systems of capillaries. There is no accumulation of oil globules, as in the yellow-fever liver. If malarial fever precedes or succeeds yellow fever, the liver may contain both oil globules and pigment granules.

The peculiar color of the malarial liver can to a certain extent be extracted by boiling-water, and the filtered decoction presents a brownish mahogany color, from the presence of the dark coloring matters of the pigment granules; the decoction of the yellow-fever liver, on the other hand, presents a golden color. The blood issuing from the cut surface of the malarial liver presents a dark purplish hue, and does not change to a brilliant scarlet, as in the yellow-fever liver. Upon chemical examination, the malarial liver contains animal starch, but no grape-sugar; the yellow-fever liver contains both substances.

GALL BLADDER.—In most cases distended with more than 1,000 grains of thick, greenish black bile, having frequently a specific gravity ranging from 1.030 to 1.037. The bile is more abundant in malarial fever and is of a deeper color, and frequently contains concretions of epithelial cells, from the coats of the gall bladder and biliary ducts, and casts of the biliary tubes. In thin layers, and when added to water, it presents a deeper shade of green. The yellow-fever bile presents a golden color in thin layers and when added to water.

SPLEEN.—Enlarged, softened, and loaded with altered blood-corpuscles and pigment granules; of a dark slate color upon the exterior; the blood of the spleen does not change to the arterial hue upon exposure to the atmosphere. In many cases the spleen is so soft that it ruptures when the attempt is made to remove it from the cavity.

YELLOW FEVER.

KIDNEYS.—These organs, as a general rule, present a brownish yellow color, much lighter than that of health. They, in common with the heart and liver, contain much free fat. When thin sections of the kidneys are examined under the microscope, the Malpighian corpuscles and tubuli uriniferi are found to be filled with granular albuminoid and fibroid matter, excretory cells detached, and oil globules. As far as my observation extends these structural alterations of the kidney have escaped the notice of preceding observers. The importance of these changes in the kidneys cannot be overestimated, for upon them apparently depends the suppression of the urinary excretion, which is an almost universally fatal symptom. The changes in the kidneys may depend upon several causes, amongst which may be mentioned as of prime importance the alterations induced in the albumen and fibrin of the blood by the febrile poison, and the congestion of the capillaries induced by derangement of the vaso-motor system of nerves and by the altered blood.

URINARY BLADDER.—As a general rule the bladder contains little or no urine in yellow fever. The urine is of a light yellow color, without any crystalline bodies, and loaded with albumen, granular fibroid matter, urate of ammonia, casts of the tubuli uriniferi, excretory cells of the kidney. In many cases the urine is entirely suppressed for as long a period as 48 hours before death. So long as the kidneys perform their functions freely and regularly the patient may recover, even though black vomit may have appeared, but if the action of the kidneys has been arrested by structural changes, death is inevitable.

MALARIAL FEVER.

KIDNEYS.—Normal in appearance and structure, except in malarial hæmaturia, when the textures are congested, and dark colored in some cases. Occasionally slate-colored spots appear upon portions of the kidneys.

URINARY BLADDER.—Often distended, with high-colored urine, free from albumen and casts. In malarial hæmaturia the urine contains casts and blood-corpuscles, and desquamated cells of the tubuli uriniferi. Casts high colored, and often contain colored corpuscles.

493 ST. CHARLES STREET, New Orleans, La., June 4, 1873.

CHILDREN'S CLINIC.

CASES FROM THE CLINICS OF DR. J. LEWIS SMITH, BELLEVUE HOSPITAL MEDICAL COLLEGE, MAY AND JUNE, 1873.

NERVOUS COUGH.

THIS boy, aged six years, presents rather a cachectic appearance, but his appetite is good and his evacuations seem to be normal. During the last six months he has been subject to a cough, not severe, and attended by little or no expectoration. The cough of late has been more frequent than at first; pulse 88 and temperature normal. Were the cough due to a lesion in the respiratory apparatus, it is probable that now, after the lapse of half a year, careful auscultation and percussion would detect something abnormal; but the result of the examination is negative as regards any lesion, and the cough is therefore, doubtless, purely nervous.

A nervous cough is not infrequent in weakly children, between the ages of three and ten years. It may result from disease of the brain; from second dentition; from some irritant in the intestines, as worms; from spinal irritation; and also, I think, independently of any local ailment, from a state of anæmia or cachexia, the function of the respiratory organs being modified or affected as that of the heart often is from the deteriorated state of the blood. In this case I am unable to discover any local cause.

In most cases of nervous cough, as I have observed it, the state of the patient was such as to indicate the need of iron, even when there was a local cause of the cough. The following example, which came under my notice several years since, shows the benefit which may be expected from the use of this agent in certain cases of this form of cough. A pale and spare boy of 11 years, who had had a troublesome cough several months, and had passed through the hands of different physicians, one at least of whom diagnosticated advanced phthisis, was taken to the late Dr. Cammann. The doctor, detecting the nature of the ailment, wrote the following prescription, and in a surprisingly short time the cough entirely ceased:—

℞ Ferri sulphat. } ℥ ss.
Acid nitric. }
Aquæ destillat. ℥ ss.

Misce.

Dose gtt. iij. four times daily, in sweetened water.

In certain patients there is no apparent local cause and no decided anæmia; and yet the cough is troublesome. I have in these cases obtained good results from belladonna and bromide of ammonium. In 1871 I was asked to see a German boy, 8½ years of age, who had suffered from a nervous cough for two months, and which latterly had been frequent and annoying. Within six days the cough entirely ceased from the use of the following prescription:—

℞ Tinc. belladonnæ. ℥ i.
Ammon. bromid. ℥ i.
Syr. simplic. ℥ ss.
Aquæ cinnamomi ℥ i.

Misce.

One teaspoonful morning and evening.

This mixture may, of course, be given alternately with the iron in cases which require that tonic.

ADHESION OF LABIA MAJORA.

In this infant, who is one year old, there is complete

adhesion of the labia majora to each other at their bases, and the vulva is occluded except at the orifice of the urethra, where there is an opening about two lines in diameter. The mother states that she has never observed any soreness or discharge from these parts, but in all probability there has some time been a vulvitis sufficient to cause excoriation of the opposite surfaces, so that they were agglutinated by lying in contact. It is fortunate that this state of the parts was discovered, for it is now easily remedied; whereas, had it continued, the union would no doubt have become firmer, and would have proved at puberty a serious obstruction to the flow of the catamenia. By drawing apart the labia gently, you observe that the adhesions separate, leaving a raw surface on either side, from which a little blood exudes. The length of the excoriated surface on either side measures three-fourths of an inch, with a width of about two lines. The mother will dust this frequently with powdered oxide of zinc, to prevent reunion, and within a week the cure will be complete.

INTERMITTENT FEVER.

This infant, now 10 months old, contracted the ague on Long Island, where the parents reside, and has had occasional attacks of it since the age of 6 weeks. I have notes of 36 cases of this disease occurring under the age of 3½ years. Several of the cases were treated in private practice, and the rest in the institutions with which I have been connected. In children above the age of 3½ years intermittent fever differs but little from that of the adult, while in those under this age it presents certain peculiarities or differences, which I trust will render the examination of these records interesting and profitable. Of these cases 19 had the quotidian form, 10 the tertian, 2 the tertian becoming afterwards quotidian, 1 the quotidian becoming afterwards tertian, while in the remaining 4 cases the form of the disease is not stated. In quotidian ague the malaria has been supposed to act more powerfully on the system, or the system is more susceptible to its influence than in the tertian form, and hence the fact that the quotidian is the prevailing type of ague in tropical regions, where vegetation is luxuriant, marshes extensive, and the heat intense. If this theory is correct, the feeble resisting power in the system of the infant explains the fact that it has quotidian more frequently than tertian intermittent, although the latter is much more common in the adult in this climate.

Facts demonstrate that infants sometimes receive intermittent fever from their mothers. If mothers during gestation have malarious cachexia, their infants, whether born at full time, or, as often happens, prematurely, are apt to be small, thin, and feeble, and occasionally they have soon after birth distinct paroxysms of the ague. Dr. Stokes related the case of a pregnant woman with ague, who believed that she noticed periodical tremors of her fœtus, but I suspect that she was mistaken, at least as regards the cause, for the paroxysm of intermittent in young children is not ordinarily accompanied by a chill.

The youngest infant in my practice who apparently derived the ague from its mother, and probably through the fœtal circulation, had the following history: Its mother had occasional attacks of tertian intermittent during the two years preceding her confinement, and her baby when one week old was observed to have the same disease, occurring also each second day, the coldness and blueness in the first stage of the paroxysm lasting from half an hour to one hour. In certain instances it has seemed to me probable that infants who were nursing had received the ague from their mothers through lactation, but I have not been able to determine this positively.

The period of incubation in the infant varies greatly, as in the adult. When the malaria is concentrated and unusually active, or the condition of system is favorable for its reception, the disease may commence soon after exposure. Thus in tropical regions travellers exposed for a single night have been known to sicken within twenty-four hours; but in our cooler latitude a longer incubative period is the rule. In the infant, however, in our climate, intermittent fever often begins in a very short time after exposure, though there may be an incubative period of some weeks. The following have been my observations relating to this point: A. M., female, 8 months old, remained two days on Long Island, in October, 1870, and three days after her return to the city a quotidian commenced. P. S., male, 11 months old, remained three days on Long Island, and a quotidian commenced four days after his return. K., 9 months old, remained on Staten Island one week, and eleven days after his return a tertian commenced. G. K., aged 3 years, remained a day and night on Staten Island, in 1870; three weeks afterwards intermittent fever commenced, preceded by a week of languor. A. U., female, aged 2 years and 2 months, had the first paroxysm of a tertian two and a half weeks after returning from a visit of one week in Hoboken. As there was no malaria in the portion of the city where these infants resided, the incubative periods are nearly ascertained.

It is well known that the paroxysm of intermittent fever in an infant ordinarily differs in certain respects from that in an older child or in an adult. The cold and sweating stages are less pronounced, while in the second stage there is an active febrile movement, lasting from two or three to six or eight hours, or even longer. In 24 of the cases of infantile intermittent which I have treated, my notes describe the character of the paroxysms. In 16 of these there was no chill or trembling in the first stage, but blueness and coolness of the extremities and features, and sudden prostration. This stage lasted from ten minutes to one hour. In the 8 remaining cases the infants were observed to tremble or shake as in adult cases. The perspiration of the third stage was in nearly all cases slight and of short duration, and in some was not observed.

In this climate intermittent fever in the adult is almost never attended with any danger unless from the cachexia which its long continuance may produce. In infants, on the other hand, the paroxysms are often dangerous, mainly from clonic convulsions, which are apt to occur in the cold stage. Convulsions increase greatly the passive congestion of the cerebro-spinal axis already present in this stage, and if not speedily relieved they may end in transudation of serum over the surface of the brain, and perhaps meningeal apoplexy, causing fatal coma. This has occurred twice in my practice.

Sometimes in young children the diagnosis of intermittent fever is doubtful, either because the disease has not continued sufficiently long, or there has not been the characteristic paroxysm. The patient may be feverish and fretful, with anorexia, and evidences of headache, but without the usual distinctive symptoms. I have sometimes in such cases been able to establish the diagnosis by detecting enlargement of the spleen. In examining for the "ague cake," the child must lie quietly on its back, and the fingers, placed midway between the epigastrium and umbilicus, be carried gently but with firm pressure outward in the direction of the spleen, when the anterior edge of this organ will be felt, if it be enlarged. It is impossible

to make the examination when the child cries, on account of the contraction of the abdominal muscles. In 1872, when a considerable number of young children with ague were brought to the children's class in the Outdoor-Department, I detected enlargement of the spleen in about one-half of the cases.

It is evident that no time should be lost in applying appropriate remedies in a case of infantile ague; for although the first paroxysm may be mild, the next may be more severe, and attended by danger. Moreover, the sooner the disease is cured the less liable it seems to be to return. Therefore we prescribe at once the sulphate of quinia or cinchonia, one and a half grains of the latter producing the effect of about one grain of the former. Our experience in the children's class in the Outdoor-Department has been chiefly with the sulphate of cinchonia, on account of its cheapness, and there has yet been no case of ague which it has failed to control. A recent writer has published statistics showing his success in curing intermittent fever by this agent, but nothing in therapeutics is more easy than to cure this disease in our climate by either of the sulphates mentioned. The chief difficulty consists in preventing a return. To an infant of two years I prescribe one grain of sulphate of quinia or the equivalent of sulphate of cinchonia, three times daily, till all symptoms of the ague have disappeared; then twice a day during the subsequent week, and afterwards once a day for some days; and finally twice or thrice a week. It is only by the protracted use of the drug in occasional doses that the return of the intermittent can be prevented.

It is important in administering these sulphates to infants to employ a vehicle which will, so far as possible, disguise the bitterness. I have found nothing so good for this purpose as the syrup of one of the berries, as in the following formula:—

℞ Cinchoniæ sulphat .....gr. xvi.
Acid. sulphur. dilut.....gtt. xxiv.
Syr. rubi idæi (raspberry)..... ℥ ij.

If the patient, when presented for treatment, is pallid from the long continuance of the ague or from other cause, physicians are in the habit very properly of prescribing iron in addition to the specific remedy. By producing a better state of the blood through this agent, and by hygienic measures, the ague is in my opinion more easily controlled, and less likely to return. The citrate of iron and ammonia dissolved in simple syrup, or the officinal Vinum ferri, are the preparations which I usually prescribe for this purpose to young children.

A MINORITY REPORT ON FOUNDLINGS AND FOUNDLING INSTITUTIONS.

(READ BEFORE THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.)

BY JOEL FOSTER, M.D.,

NEW YORK.

It will be remembered that a report was read by Dr. Jacobi, Chairman of the Committee on Foundlings and Foundling Institutions, at the last session of this Society; that, after some discussion, the whole subject was referred back to the committee, to report to the Society at its session of 1873; and that my name was added to the committee. Having waited in vain for the committee to be called together by the chairman, until within a week of the meeting of the Society, I hastily offer a few remarks on the subject, regretting that it was not in abler hands. The ablest authors on social philosophy and political economy agree that provision should be made for the care and protection of newly-born infants, and boldly protest against the policy of providing facilities for the easy abandonment of them. That asylums for the care of illegitimate and abandoned infants should be established and maintained, is now conceded by all who have thoroughly investigated the subject. Political economy has long since fixed the pecuniary value to the State of each healthy child saved to grow to manhood and womanhood. Practical statesmanship has recognized the correctness of this principle, and in various ways sought to give it effect. Hence, institutions having for their object the saving of infants which are without parental care or support, should be established. The object is worthy of commendation, viewed from the low standpoint of political economy; and the foundling asylums, and similar institutions of European states, must be regarded as among their noblest charities.

But charities of this kind which attach a merely commercial value to the life to be saved are liable to be organized on imperfect plans: while seeking to save the individual life in point, they adopt methods which lead to the sacrifice of this very life, and foster the evil which they should aim to prevent.

Foundling hospitals or asylums, as hitherto conducted, in many instances proved not only expensive failures, but they have been the nurseries of the crime of foundlingism.

Parentage has been ignored, and the crime incident to foundlingism has been carefully covered or concealed. The *twig* has been clipped from the parent *stem*, and every effort has been made to rear it by artificial means.

The methods of rearing hitherto adopted, whether by artificial feeding or farming out, have practically proved unsuccessful; at least that degree of success has not yet been obtained which we believe our enlightened and progressive age demands.

The whole subject of foundlingism should be regarded and studied from a much higher standpoint than political economy, which is but one feature of this great evil. Practical christianity, as well as practical statesmanship, in this country recognizes in the illegitimate not only a life to save, but crime to be prevented, maternal instincts to be cherished and fostered, and parental duties to be inculcated and enforced by moral and religious means.

We believe that the genius of Christian civilization demands of us—1. That we regard the infant as a human being, and as such entitled to all the privileges and immunities attached to our common race. 2. That whatever may be the accidents of its birth, it has an inherent right to be nursed and cared for by its mother. 3. The mother is entitled to our protection and care, while she discharges the incumbent duties of maternity. 4. That when released from such duties, she still is entitled to our sympathies and our efforts to save her from a life of crime.

No physician can doubt that if this class of infants were nursed by their mothers, under suitable regulations, the mortality would be very slight compared with any other method of rearing them. "The *mother's breast* is the infant's *birthright*," and suckling a *sacred duty*, to neglect which is prejudicial to the mother and often fatal to the child.

The mother supplies something more to her infant than food, and that something, which may be designated as love, tenderness, or sympathy, is an essential

element in the child's health. The hired wet-nurse cannot supply all that the child derives from the nursing and the care of its mother.

But while it may be admitted that these views are in general correct, can they be reduced to practice? We are prepared to show that the plan is both practical and economical.

The New York Infant Asylum is based on the following principles: 1st. The illegitimate child is entitled to the care of its mother. 2d. If for any reason the mother cannot nurse her child, it is entitled to the care of a competent wet-nurse. 3d. The mother of the illegitimate, presumed to be at heart virtuous, having been deluded by false promises, is entitled to protection and sympathy. This Institution has now been in active operation between one and two years, and has demonstrated the correctness of the above principles. The deluded mother, on learning that she can find refuge for herself and child, gladly accepts the offer to enter the Asylum and nurse her infant, where she is kindly treated, besides saving the life of her infant. She is protected and saved from a life of infamy and disgrace. To save the life of the newly-born requires the skilful care and love of the mother, without which few survive three months.

That breast-milk is not only the appropriate food to save life, but to produce proper development, to form the constitution of the child, and to lead it in the paths of health, it is necessary to commence our management of it from its birth; for it is too true that the system is influenced by the agency of external power, with which, from the moment of its birth, a child comes in contact by the inheritance of a robust or weak organization. That the chances of life are very much greater when nursed by the mother, is shown by the records of hospitals for diseases of children, especially in the reports of the Clinical Hospital for Diseases of Children in Manchester, England, carefully prepared by Doctors Morei and Whitehead. A few of these results will be quoted. 1st. The direct and baneful agency of want of good breast-milk may be inferred from the tables given below, from which it appears that the larger the supply of breast-milk and the more extensively it is given the better is the child developed, and *vice versa*.

Results observed in 1041 children, first and second years: 1st. Children having had breast-milk alone to the ninth month or longer, some to the fifteenth month: Of 150 children, 94 well developed, or 62½ per cent.; 35 medium, or 23 per cent.; 21 badly, or 14 per cent.

2d. Those who have had breast-milk up to the sixth, eighth, or ninth month, after which they were partially weaned, about 20 per cent. of them receiving for some months longer other food besides the breast, there were, in 113 children, 65 well developed, or 57.4 per cent.; 29 medium, or 25.6 per cent.; 18 badly, or 19.7 per cent.

3d. Those having breast-milk moderately abundant, and bread-food along with it from birth or early age: of 216 children, 110 well developed, or 51 per cent.; 54 medium, or 25 per cent.; 52 badly, or 24 per cent.

4th. Children who from birth, or the age of two or three months, besides an abundance of breast-milk (as stated by mothers), had received additional food, generally boiled bread and milk, or merely with sugar, water, and arrowroot: of 105 children, 55 well developed, or 52 per cent.; 29 medium, or 28 per cent.; 21 badly, or 20 per cent.

5th. Children who have had from the earliest infancy a moderate or small supply of breast-milk, some for a few months only, others up to nine, twelve, to fifteen months, with other food from birth: of 407 children, 100 well developed, or 26.8 per cent.; 107 medium, or 20 per cent.; 191 badly, or 45 per cent.

6th. Children fed entirely by hand, and no breast-milk: of 50 children, 5 well developed, or 10 per cent.; 13 medium, or 26 per cent.; 32 badly, or 64 per cent.

Thus, taking the extreme points of the table, we have in the former case 62.6 per cent. well developed, and only 14 per cent. badly developed; in the latter case, 10 per cent. well developed, and 64 per cent. badly developed. It was likewise noticed that those nursed exclusively on breast-milk rapidly advanced in dentition and ossification of the skull, and the early facility of walking; many were able to walk in from 10 to 12 months. From a reference to the annuaries of mortality in Paris, Dr. Quetelet obtained nearly everywhere the same results—that in the first three months after birth, twice or three times as many children die as in the other months of the first year.

Other authors have made the same observations. M. Bonoiston de Chateauneuf says: "It is true that, to preserve the life of a child, care does *everything*, and climate *nothing*, or very little."

"Switzerland and Holland are the countries where the smallest number of infants die, owing to the fact that all the mothers nurse their children." The chances of infant life under various kinds of care is very interesting. In the houses of well-to-do people it is estimated that from 80 to 85 survive their first birthday.

In all the city of New York, about 76 per cent.

In all Massachusetts, 81½ per cent.

In the rural neighborhood, 87½ per cent.

Of the foundling infants on Randall's Island, until recently bottle-fed by others than their mothers, about 10 per cent. lived to the age of one year; bottle-fed by mothers, 70 per cent.; wet-nursed by others than their mothers, 27½ per cent.; nursed by their own mothers, 80 in 100 were saved.

In the last-mentioned institution is found ample proofs of the great importance of the maternal instinct and affection in the care of the infant, even in low life. This is seen even in the cases where the child is reared upon artificial nourishment.

Experience in the Foundling Institution of the "Sœurs Gris-es," or Gray Nuns, in Montreal, as taken from the report of the Montreal Board of Health for the last six years, ending January 1, 1871, is as follows:—

Year.	Received.	Died.	Alive Jan. 1, 1871.	Percentage alive.
1865	729	656	73	10
1866	624	581	43	6.9
1867	652	598	54	8.3
1868	678	637	41	6.1
1869	670	633	41	6.3
1870	700	662	38	—5
Total	4059	3767	292	—7

Thus it appears that when deprived of the care which the maternal affection alone can insure, the hired wet-nurses and bottle-feeders, all in the rural districts near Montreal, failed to save even 8 in 100 of all the babies they received and farmed out. The Foundling Asylum under the care of the Sisters of Charity in New York tried the experiment of farming out infants in the rural districts of Long Island,

Westchester, and adjoining counties, and were obliged to recall their children on account of the greatly increased mortality, being very much greater than within their institution, although they kept a constant surveillance by people employed to look after them.

It has been before stated that care is everything in the early nursing of the infant, and it is well known to all physicians who have practised in the country, that very little attention is paid to sanitary science, and that the most absurd ideas prevail among the greater portion of the common people concerning the ventilation of sleeping apartments, or the quantity of pure air necessary for the welfare of the infant, to produce proper development and insure its life by proper feeding. The absence of a mother's care is manifest, especially in early life.

The plan adopted by the New York Infant Asylum, and now in full operation, is as follows: The house of reception is always well ventilated, with plenty of sunlight, and an abundant allowance of room for each child; always under the care of a competent superintendent and an educated nurse. The infants are in all cases wet-nursed by their mothers, if possible; they are then transferred to a branch of the institution in a rural district, with a southern exposure, with perfect drainage, and an abundance of pure water. It is a State institution, every county having equal privileges as New York. The children are kept scrupulously clean, as likewise their mothers or nurses. The bed clothes are changed frequently, and with the mattresses are thoroughly aired every day. Fresh air is allowed to pass freely through the nurseries every day; but when the currents of air from the windows and ventilators are too strong, the children are carried into another ward during the ventilation.

When the weather will permit, the children are carried into the open air, and continued in it for a considerable length of time. When the children arrive at a suitable age they are adopted out to respectable foster-parents. Applications are almost daily received from worthy, and often wealthy, people, to adopt children. The asylum is visited daily by one or more of the lady managers.

The lying-in department is in the city of New York, and when completed will have all the modern improvements suggested by the best sanitarians.

The success of the Asylum since its inception has demonstrated the truth of the principles before stated, that seventeen per cent. only died where they were nursed by their mothers, while twenty-three per cent. died where they were nursed by hired nurses, under the eye of the head-nurse. It must likewise be taken into account, that in several instances the infants, when received into the institution, were in a very unhealthy condition, never having nursed, and some of them dying in a few hours after reception. When the unfortunate female about to become a mother applies for admission, she, in most instances, readily consents to remain after her confinement and nurse her child, thus saving the expense of a hired wet-nurse, and saving the life of her child.

During the last year applicants have been received from seventeen counties in this State, who, but for this institution, would have resorted either to the vile abortionist, or to some of the numerous private establishments advertised in the daily papers, usually kept by a class of quack-doctors or immoral women, who care little for the life of either mother or child.

In conclusion, we have endeavored to show that it is the duty of society to provide asylums for illegitimate and abandoned infants, likewise to adopt the best and most humane methods of saving the life of the newly-born; and last, but not least, is the sacred duty of saving the unfortunate mother, and to prevent the perpetration of fœticide, infanticide, and abandonment; that the former can be accomplished by inducing the mother to nurse and care for her child; that the proper food for the young infant is the *milk from the mother's breast* and her *tender care*; that we have shown, by statistics from the Montreal Board of Health, the utter failure of the farming-out system in the country around that city, and likewise the experiment of the Foundling Asylum under the care of the Sisters of Charity in the country around New York; that infant asylums organized and conducted on the plan recommended by this report should be encouraged, and receive material aid from the State; that the system of farming out by the State would be neither economical nor humane, but unwise; that it would have a tendency to create numerous foundling bureaus in every large town in the State, with paid superintendents, agents, and clerks, with a central distributing reservoir, and would soon become a political engine—an asylum for worn-out politicians, instead of a refuge for the unfortunate and despairing mother and her helpless infant.

THE RATIONALE OF PERMANENT DRESSINGS.

By A. B. CROSBY, M.D.,

PROF. ANAT. BELLEVUE HOSPITAL MEDICAL COLLEGE, N. Y.

The subject of permanent dressings is one which has attracted much attention from surgeons, especially in this city, during the past few years. Extended clinical observation has demonstrated that this appliance of the surgeon is susceptible of a much wider application than was formerly supposed. The results have been all that could be desired, and there is no likelihood that permanent dressings will lose the high favor in which they are at present held by the profession. It is sometimes well, after the clinical utility of a surgical dressing is fully demonstrated, to interrogate ourselves as to the reason for the faith that is in us. It is in this view that I shall venture to offer, very briefly, a few thoughts on the rationale of permanent dressings.

The primary and cardinal benefit of a permanent dressing is, that it gives to the affected part *absolutely perfect rest*. Hence it has come to be used in fractures, in diseased joints, in sprains about joints, in any condition, in fact, where rest is the *sine qua non* of the treatment. In a fracture the surgeon seeks to coaptate the fragments and then to retain them in their normal relations; and long ago observed that, in order to treat fractures most successfully, the splints must represent a perfect mould of the normal contour of the affected limb, so that the muscles of the affected part might be subjected to *equable lateral pressure*. It needs little observation to show that a straight splint applied to a curved surface must make *unequal* pressure, and therefore not only fail to completely control the muscles, but, by the very inequality of the pressure, interfere with the circulation and cause more or less swelling. A permanent dressing well applied gives an exact mould of the limb, and so preserves its normal contour—a condition absolutely essential to the perfect restoration of a fractured bone.

I had for a series of years used permanent dressings in fractures of the leg with excellent results. In August, 1870, I saw a young Boston girl who, while on a visit to some friends in Vermont, was thrown from a wagon and got an oblique fracture of the left femur in the middle third. The accident occurred

some eight miles away from the house of her friends, and the intervening roads were very rough and hilly. As she had been carried into a farm-house situated on an inaccessible mountain-road, it was desirable, on all accounts, that she should be transported the above distance, to where she might have necessary care and appliances of comfort. I accordingly put the limb up in a well-adjusted plaster-cast dressing. Adhesive strips were previously applied to the sides of the leg, secured by a roller, and Surgeon Warren Webster, U. S. A., who happened to be with me, made firm extension on the leg and held it in a normal position while I applied the permanent dressing. The limb was drawn out to its full length, and maintained there until the plaster had firmly set. The patient was then placed on a mattress in the bottom of a wagon, and transported eight miles without pain or displacement of the fragments. On arriving at her destination no shortening could be detected. I saw the patient again in eight-and-forty hours and there was still no shortening. The attending physician subsequently reported to me an excellent recovery without appreciable shortening.

In diseased joints, it is a matter of common observation that the disease itself acts as a stimulus, and thus excites reflex contractions in the muscles about the joint. Spasmodic contraction of the muscles, occurring at short intervals, subjects the articular cartilages to constantly recurring concussions, and so the mechanical violence constantly increases the disease until disorganization of the joint is the result. What the affected joint requires to insure recovery is *absolute* rest. It was formerly the practice to resort to tenotomy in such cases, in order to give the joint rest; but the object was only partially attained in this way. A permanent dressing gives to the joint *perfect rest*, preventing all flexion and extension; entirely controls muscular contraction, and so prevents the articular surfaces from contusing each other. Clinical experience has demonstrated, moreover, that the permanent dressing may be used with advantage at any stage of the disease. For instance, in acute inflammation of the knee the permanent dressing keeps the diseased surfaces at rest, and the equable compression to which the swollen joint is subjected promotes rapid absorption of the fluids effused into the joint, as the result of the inflammation.

It is claimed by the advocates of this plan that in case of much suffering in an acutely inflamed knee, it is only necessary to apply cold outside of the permanent dressing, and give opiates freely, in order to insure a favorable result at an early period. If the case is chronic, the same dressing answers equally well. Even if there are fistulous openings, the dressing can be fenestrated so as to permit free discharge, while perfect immobility of the joint can be maintained. The value of this dressing cannot be overestimated in connection with diseased joints.

In cases of severe sprains about joints, there is likely to be, in addition to the tension of the tissues and the extravasation of blood into the soft parts, an irritable condition of the muscles set up, which may contuse the articular surfaces, and so excite arthritic irritation, if not actual inflammation. The *immediate* and *equable* application of a permanent dressing after a sprain will give the part rest; will promote the absorption of extravasated blood; will prevent muscular contraction, and will so prevent the joint from becoming either irritable or inflamed.

The above facts, which clinical observation has abundantly demonstrated, are quite sufficient to show the advantages that may accrue from the use of permanent dressings. Of the various substances employed in these dressings, such as starch, gum and chalk, dextrine, flour-paste, silicate of potassa, glue, and plaster-of-Paris, the latter is by far the best, by reason of its cheapness, the rapidity with which it becomes solid, and the ease with which it may be adjusted.

Of the different ways of applying plaster, I very much prefer, myself, surrounding the limb with two thicknesses of Canton flannel, drawing them smooth, and cutting the edges so that they will just meet. These now, being saturated in a basin of fluid plaster, can be spread smoothly one upon the other, applied around the limb (held in a proper position), and be secured by a single roller-bandage carried around the whole. If the layers of flannel just meet around the limb when dry, they will not, when saturated with plaster, meet to within from half an inch to an inch. As is well known, the equable compression of the plaster-cast speedily empties the superficial vessels, and so reduces the size of the limb, leaving the dressing loose. The outside roller can now be easily peeled off, the edges of the cast sprung together, and a new roller applied so as to again equally compress the limb. Thus all necessity of cutting open the dressing—always a troublesome matter—and applying a new one, is done away with.

I have heretofore alluded to the fact that a permanent dressing, if properly applied, will prevent muscular contraction, and so prevent deformity in fractures, on contusion of articular surfaces in cases of arthritis, and after sprains. This admirable effect is, in my judgment, brought about by the *firm, equable, lateral pressure* to which the muscles are subjected.

Recalling now something of the anatomy of the voluntary muscles, we may know that the ultimate fibrillæ make up the proper contractile tissue of the organ. These are flattened cylinders, about $\frac{1}{1\,8\,0\,0}$ of an inch in thickness, and marked by transverse striæ. Each fibrilla is made up of a series of quadrangular particles termed sarcous elements. Carefully examined, these seem to be made up of pellucid particles, having a rectangular outline, but a dark centre. So it is possible that the sarcous elements are, after all, nucleated cells having a linear arrangement. The striæ may thus prove to be the line of junction between the cells. It is proper to state, moreover, that some observers consider "the sarcous elements as artificial products occasioned by the breaking up of the fibril at the parts where they are thinner." There seems good reason to believe, moreover, that, when a muscle contracts, its sarcous elements change their form, the transverse diameter increasing at the expense of its longitudinal measurement.

If a whole muscle is examined when in a state of contraction, it is found to be shortened at the same time that it is swollen and hard. The surface of the muscle is manifestly wrinkled, and its fibres frequently oscillate or vibrate from alternate contraction and relaxation. It is this vibratory motion in the fibres of a contracting muscle that gives rise to the sound heard on the application of a stethoscope. Every muscle augments in thickness during its contraction, and, in connection with my topic, it becomes an interesting question whether the whole mass of a muscle increases or diminishes during a contraction. Schwamerdam tried the experiment with an insulated solid muscle, not yet dead, by immersing it in a tube full of water and then irritating it until it would contract. He found that the water descended in the tube, but the result was not uniform. A simple experiment may be made by immersing an arm in a properly constructed tube containing water. The level of the water

while the muscles of the arm are relaxed should be noted on the tube. On contracting the muscles, the water will be found to descend considerably below the mark on the tube; but we are not to forget in this experiment that the diminution in the bulk of the arm, during muscular contraction, may be accounted for, partially at least, on other grounds. When all the muscles of a limb are in a state of contraction not only is the ingress of blood into the limb retarded, but the veins are largely emptied by the pressure, so that the diminished size of the limb may be partially due to a diminution in the amount of blood contained in the part. Nevertheless, Etmann is credited with having immersed an eel entirely in water, and then having excited muscular contraction, he found that the water descended. In this experiment, if correctly reported, there would seem to be no element of fallacy. From such an experiment, it would seem to be a fair inference that a muscle does diminish in bulk during the period of contraction. The fact, however, is patent, that the transverse diameter of a muscle increases during contraction.

If, now, we seek definitely for the rationale of permanent dressings, we shall find, I think, that they accomplish the purpose for which they are designed in at least three different ways. In the first place, permanent dressings bring about the desired result by making *firm and equable lateral compression of the muscles*. Such compression of the muscles ought, theoretically, and does *de facto*, prevent contraction and consequent shortening in fractures, concussion of articular surfaces, etc.

It is well known that in violent puerperal convulsions, or other muscular spasms, immediate relaxation can be induced by carrying a cord around the limb, crossing the ends, and then jerking them violently. Every boy who suffers from crural cramp instinctively seizes the offending muscles and compresses them with the utmost firmness. In both cases speedy relaxation is the result: here firm lateral compression induces the desired end. I am equally sure that a firm lateral compression of all the muscles of a limb will entirely quiet their irritability, and that they will thus continue as long as the above conditions are carefully maintained. To attain the best results, especially in fractures, it is desirable that the dressing should always be firmly in contact throughout the limb, and hence the necessity of tightening it whenever it becomes loose. Firm lateral compression, then, affords mechanical support to the muscles; moreover, under this condition the transverse diameter of the muscles cannot increase, without which contraction is impossible.

In the second place, permanent dressings have an important influence on the blood-supply of the part to which they are applied. The first effect of equable compression of the limb is to mainly empty the superficial veins, and compressing it ultimately retards the afflux of blood into the limb. The amount of blood then circulating through a limb is manifestly diminished by a firm permanent dressing. In order that muscular tissues should contract, it is necessary that there should be a certain activity of nutrition and a certain degree of temperature. It is especially in warm-blooded animals that these conditions are most essential. It is a well-established fact that if the supply of nutrient material is cut off from a muscle, as when the blood is prevented from circulating through it, its contractility will diminish and soon cease altogether. By allowing the blood to again permeate the muscle its contractile power may soon be restored. This experiment, first performed on dogs by Struonits, has been repeated on the cold-blooded animals by Engelhardt and Valentine, with the same results.

The nutritive process and the expenditure of force is, of course, most rapid in warm-blooded animals. The maintenance of irritability in them is directly dependent on the supply of blood and the influence of oxygen; when the latter are cut off, the former soon fails, and ultimately ceases.

From these facts it legitimately follows that if a permanent dressing diminishes the amount of blood in a part, it will proportionately diminish the part so compressed—will, in fact, prevent contractions, by cutting off from the muscular tissue a considerable proportion of its essential stimulus, the blood.

It is important, also, to mention an important corollary in this connection. Clinical observation has abundantly demonstrated the fact that in fractures treated by permanent dressings, irritation, pain, heat, swelling—inflammation, in fact—is exceedingly rare. Permanent dressings, by arresting all muscular contraction and giving the part absolute repose, obviate the tendency to morbid action in the part. But beyond this, the equable compression of the limb, by diminishing the amount of its blood and by retarding the ingress of the vital fluid, directly and mechanically prevents the hyperæmia which is the necessary condition of inflammation. So evident is this principle, that some surgeons of our time and city are accustomed to resort to this dressing as a prophylactic against anticipated inflammation. Thus, after forcibly breaking up an anchylosis of the knee-joint, some surgeons not only resort to firm permanent dressings, but, in order to still further prevent the further ingress of blood, they add a graduated compress over the main artery of the limb.

In the third and last place, the good effects of permanent dressing are due in no slight degree to the accurate relation that exists between the cast and the configuration of the limb. About the ankle, the knee, the wrist, the elbow, etc., there are certain prominences or processes alternating with depressions. These offer points of support when covered by an accurately fitting mould of the part. Moreover, we may notice that the forearm, arm, leg, and thigh, each constitute a truncated cone. A permanent dressing forms a tightly-fitting conical case, by which extension and counter-extension are equably diffused over the whole surface of the affected part. The advantage to be derived from the conical form of the thigh, in treating fractures of the femur, has been realized by surgeons. In Latta's splint for fractures of the femur, a conical zinc case, properly padded, is buckled firmly around the thigh, and the upper end of the long splint being attached to it, the counter-extension is equably diffused over the whole surface covered. The counter-extension can thus be effectually accomplished without any pressure upon the perinæum, and without any irritation of the skin covered by the zinc case. To sum up, then, it follows from the foregoing considerations that the rationale of permanent dressings may be—1. In the principle of *equable lateral compression* preventing muscular contraction. 2. Diminution in the blood-supply, with proportionate loss of contractility; and 3. The conical form and irregular configuration of the extremities, by which extension and counter-extension can be equably diffused. We have learned clinically that permanent dressings prevent deformity and insure absolute repose in an injured part. There can be no doubt that they are among the most valuable dressings of the modern surgeon. It has been my purpose to show that the use of this valuable surgical appliance is not only empirical, but rational.

Progress of Medical Science.

Inoculability of Pyæmic Blood.—Raynaud inoculated two series of rabbits with blood taken from a woman suffering from pyæmia. In the first series, ten drops of blood taken from the woman's hand were injected subcutaneously into a rabbit. It manifested a slight illness, which soon passed away. One drop of its blood killed a second rabbit in seven days. Immediately after death of the latter, blood was taken from its heart, which, in the dose of a thousandth part of a drop, killed a third rabbit in 20 hours, and a millionth part of a drop of this animal's blood killed a fourth in 30 seconds. The section showed nothing noticeable in either case save ecchymoses.

In the second series, the first rabbit was injected with 10 drops of the woman's blood, in the axillary vein. The rabbit sickened and died on the fourth day. A fresh peritonitis and a metastatic abscess in the lung were found. From this animal, as in the first series, a second was inoculated subcutaneously; from this, again, a third, and so on through eight generations, with constantly minuter doses. The millionth of a drop injected into the seventh rabbit killed it in less than three days, while the eighth escaped uninjured after injection of a trillionth of a drop.—*Gaz. hebdomad.*, No. 14, 1873.—*Centralbl. f. d. med. Wissensch.*, No. 31, 1873.

The Influence of Carbolic Acid in Preventing Pyæmic and Septic Infection in Animals.—Rosenbach injected dogs and rabbits with purulent fluids, and others with the same matters, but with the addition of a portion of carbolic acid. The animals were injected subcutaneously with fresh but unhealthy pus obtained from a congestive abscess and a carious humerus. The result was, that after injection of the purulent matter alone, a phlegmonous inflammation followed in each case, from which four of the animals died in a few days, while one recovered. In the four fatal cases—of which three ran their courses with violent fever—the death was in each instance occasioned by extension of the phlegmon and destruction of the tissues. In seven cases similar pus, from the same source, was injected, to which 5 p. c. carbolic acid had been added. In all these cases the only result was the formation of local abscesses. The temperatures in these cases exceeded the physiological maximum but in one instance. Experiments to determine the minimum of carbolic acid necessary to produce this result showed that ½ p. c. of the acid was insufficient, and 1 p. c. afforded no certain protection. Some experiments with septic purulent matters, kept for two months in a warm temperature, indicated that the influence of carbolic acid on decomposed pus was less than with fresh septic matter. Finally, experiments with healthy pus—pus *bonum et laudabile*—showed that the addition of carbolic acid entirely prevented the local infection as well as the general intoxication which were otherwise produced.—*Habilitationsschrift, Göttengen.—Berl. Klin. Wochenschr.*, No. 27, 1873.

Hydrochlorate of Apomorphia.—This new emetic has been recently subjected to a series of trials by Mörz, with results which indicate that it has a decided superiority over the emetics in common use. The dose employed varied from 0.006 to 0.012 of a gramme. Emesis occurred from 3 to 17 minutes from the time of administering the drug. The method of administration adopted by preference was subcutaneous injection of the arm. The injection occasioned no pain, and but little local irritation. The immediate effects were as follows: After a few minutes a slight sensation of heat was felt, a little dizziness, a slightly apathetic disposition, moderate or scarcely noticeable change of color in the face, increased secretion of saliva, one or two efforts at vomiting, and then a sudden discharge of the contents of the stomach. If the nausea continues, another emesis follows, after which the patient invariably falls into a brief, quiet slumber, and awakes afterwards without the slightest unpleasant symptom.

The advantages of apomorphia are summed up as follows:—

(1.) Convenience of administration.

(2.) Employance of smaller doses than other emetics require; for adults 12 centigr. may be regarded as the amount which will induce vomiting under all circumstances.

(3.) Harmlessness, a quality which, in an equal degree, can be attributed to neither tartar emetic, ipecacuanha, nor sulphate of copper.

(4.) Certain and speedy accomplishment of desired effect.

While the same indications applicable to other emetics apply to apomorphia, it is especially recommended for children's affections, particularly in threatened attacks of laryngitis. Four milligrammes are often sufficient to avert the danger of suffocation. It is also recommended in the treatment of the insane, but its most brilliant results, it is claimed, are exhibited in cases of acute poisoning. Attention is finally called to its value as an expectorant, where, in conditions of great debility, it is desirable to clear the air-passages, as in pneumonia, as well as in feeble individuals and the aged.—*Prager Vierteljahrschr.*, Bd. 115—*Oesterr. Zeitschr., f. Pr. Heilkde.*, No. 24, 1873.

Treatment of Salivation by Atropia.—Heidenheim has recently investigated the action of atropine on the salivary secretion, and has shown its effect to be (1) to annul the influence of the corda tympani upon the secretion, but (2) not to interfere with its influence upon the circulation, nor (3) to prejudice the secretion by irritation of the sympathetic, thus not destroying the gland-cells. Following H.'s investigations, Ebstein has applied atropine to the treatment of a case of salivation with remarkable success.

A patient was admitted to the hospital at Breslau, who some months previously had suffered an attack of hemiplegia. At the time of admission traces of the paralysis still remained, with some drooping and partial immobility of left half of the mouth. From the corner of the mouth saliva flowed profusely, and was too copious to be accounted for merely by the paralysis of the orbic. oris. According to the patient's statement, this discharge had persisted for about a month, coming on some months after the occurrence of the hemiplegia. Some drooping had accompanied the paralytic stroke at first, but afterwards this ceased.

The atropine was administered at first in pills, each containing 0.0005 atrop. sulph. From one a day the dose was gradually increased to 4 pills (0.002 pro. die). The discharge of saliva was at the beginning 300 c. c. daily. With the increase of the dose the discharge gradually diminished to 275, 100, and 90 c. c., though it did not cease entirely. On stopping the drug the saliva flowed as at first. The atropia was next administered subcutaneously over the submaxillary gland of the paralyzed side; 0.0003 gramme so injected had no effect. The dose was increased to 0.0006, and by degrees to 0.0016. One or two minutes after injecting 0.0006 the patient noticed that his mouth was drier, and in from 5 to 7 minutes the flow had ceased entirely. After the dose of 0.0016 there was no saliva from 4 o'clock P.M. till 6 the next morning. Afterwards the

flow recurred. When the injection was made over other parts of the body the effect was delayed to about twice the length of time. This was also the case when the atropine was dropped into the conjunctival sac.

The writer believes that the proper narcotic for salivation is atropia, and in conclusion thinks he can "recommend its use in the treatment of salivation to his colleagues with good conscience."— *Wilh. Ebstein, Berl. Klin. Wochenschr.*, No. 25, 1873.

Tracheotomy in Diphtheria.—During the years 1861–1872 inclusive, there were performed in the department of Prof. Wilms, in Berlin, 330 tracheotomies on diphtheritic patients under 16 years of age. Up to 2 years of age there were 6 operations, and all died. In the ages of 2–3 years, there were 56 operations, 15 recovered; 3–4 years, 69, 22 recovered; 4–5 years, 74, 18 recovered; 5–6 years, 57, 20 recovered; 6–7 years, 33, 15 recovered; 7–8 years, 21, 5 recovered; 8–14 years, 19, 8 recovered; total, 103 recoveries (31⅓ per cent.)—boys, 36⅓ per cent., girls, 24⅓ per cent. In the first two years, and between the ages 11–14 inclusive (of each 6), not a case recovered. The constantly unfavorable result in the later periods of childhood is accounted for by inferring that the relatively more capacious air-passages must suffer from a higher grade of disease before they afford sufficient indications for operation. In operating, chloroform is usually employed, all bleeding vessels, veins or arteries are tied, and as a rule the interior tracheotomy is preferred. As a rule, the canula could be removed between the 5th and 8th days. Practically, the indication for its removal was inferred if within 4–6 days the morning temperature was somewhat higher than upon the previous evening, and the respiration a little more frequent. When the indication was not regarded, the discharge soon became reddish—an evidence of irritation.

A pulse of over 152, a few hours after the operation, renders the prognosis unfavorable, and with a pulse of 170, the patient is sure to be lost; if less than 130, the prognosis is, with few exceptions, favorable. A high temperature soon after the operation (39° C. and over) is unfavorable; a normal temperature upon the following day is very favorable. Sudden rise of temperature usually points to complications or a relapse.— *Bartels. Jahrb. f. Kinderhlkde.*

A Case of Syphilitic Enteritis.—A well-developed child, six weeks old, was attacked by a macular syphilide of the skin. Under treatment it disappeared in three weeks, and the child remained well till its fourth month. It then began to suffer from an apparently slight intestinal catarrh, which, however, obstinately resisted all treatment. The stools were copious, at first of greenish mucus, with here and there streaks of blood, finally of rice-water appearance, and vomiting became frequent. The diagnosis enteritis follicularis was made, and from the child's debilitated condition a bad prognosis was inferred. After two months' duration of this affection, an extensive ulcerative syphilide broke out. Antisyphilitic treatment was adopted, and the syphilide rapidly receded with, at the same time, a marked subsidence of the intestinal symptoms, and in three weeks the child was recovered. That the intestinal affection was due to the syphilis was presumed from the coincidence of the syphilide upon the skin, and its ready yielding to antisyphilitic treatment after a symptomatic treatment had failed.— *Orvosi Hetilap*, 1873, No. 18.

Ligation of the Arteria Innominata.—Dr. E. S. O'Grady, of Mercer's Hospital, England, recently ligated the innominate artery for an aneurism of the subclavian in a patient nearly sixty years of age.

ARTICLES IN OUR EXCHANGES.

SURGERY.

Congenital hip-luxations. *Archiv. d. Heilkde.*, xiv., 3 u. 4 *Heft.*

Resection of the knee, with recovery. *Med. Corr.-Blatt.*, June 3, 1873.

OPHTHALMOLOGY AND OTOLOGY.

Development of the external ear. *Monatssch. f. Ohrenheilkunde*, vii., No. 3.

Symptoms which the report of firearms produce in the ear. *Ibid.*, No. 4.

On the choice of the point of puncture in the membrana tympani in dividing the tendon of the tensor tympani. *Ibid.*

The mode of origin of the bony canals in the region of the drum of the ear. *Ibid.*, No. 5.

Voltolini's method of dividing the tendon of the tensor tympani. *Ibid.*

Multiple incisions into the membrana tympani to relieve tension. *Ibid.*

Condition of the tympanum in the fœtus and young infants. *Ibid.*

The relation of the canalis facialis to the seventh cerebral nerve in adults. *Ibid.*, No. 6.

The application of the tympanic catheter. *Ibid.*

The organ of hearing. *Ibid.*

The pearl-tumor of the temporal bone. *Ibid.*

Polypoid hypertrophy of the mucous membrane of the middle ear. *Archiv. d. Heilkunde*, xiv., 3 u. 4 *Heft.*

Secondary changes of the mucous membrane of the middle ear. *Ibid.*

Embolism in the mucous membrane of the tympanum. *Ibid.*

Remarks on the operation for entropion and distichiasis. *Berl. Klin. Wochensch.*, 25, 1873.

Amaurosis in child-bed. *Ibid.*, 23.

Histology of the cornea. *Allg. Med. Central-Ztg.*, xlii., 46.

OBSTETRICS AND DISEASES OF WOMEN.

On diminishing the size of uterine polypi for their easier removal. *Memorabilien*, xviii., 5.

A case of eclampsia parturientium. *Berl. Klin. Wochenschrift*, No. 22, 1873.

Methods of producing artificial premature delivery. *Med. Corr.-Blatt.*, xliii., No. 21.

NERVOUS DISEASES.

The inequality of the pupils in unilateral affections of various portions of the body. *Allg. Wien. Med. Ztg.*, No. 26, 1873.

Disturbance of the memory. *Der Irrenfd.*, 5, 1873.

Accidents and casualties in the English insane asylums. *Ibid.*

Collection of mistaken cases of insanity. *Ibid.*

MEDICO-LEGAL.

The forensic importance of the human hair. *Schmidt's Jahrb.*, Bd 157, No. 3, 1873.

Scheme of a vaccination-law. *Allg. Wiener Med. Ztg.*, No. 23, 1873.

ANATOMY AND PHYSIOLOGY.

The origin of the physiological curvature of the spine in men. *Virchow's Archiv.*, 57. Bd., 3 u. 4 *Heft.*

The pathological anatomy of lepra Arabum. *Virchow's Archiv.*, 57, Bd., 3 u. 4 *H.*

The iodine mineral waters in Hall. *Allg. Wiener Med. Ztg.*, No. 22, 1873.

DENTISTRY.

The significance of the teeth in the animal economy. *Deutsche Viertaljahrschr. f. Zahnheilkunde*, xiii., 3.

General appearances in the dentine. *Ibid.*

The occurrence of wedge-shaped cavities on the facial side of the neck of the tooth. *Ibid.*

New apparatus for dental operations. *Ibid.*

THE MEDICAL RECORD:

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THE ABUSE OF MEDICAL CHARITIES.

Our relations to the community as dispensers of medical charity have always rendered us liable to every sort of imposition. This is no more than could be expected, verifying the truism of a general principle, that there is never a use without an abuse. We always expect to find unprincipled individuals, who are ever ready to take a mean advantage of the good intentions of others, and by false representations are willing to appropriate benefits which they know belong to others. In matters of charity this is pre-eminently the case, from the lazy, lying mendicant at the street-corner to the base miser who sneaks into the free ward of a hospital and prostitutes the very name of poverty by the meanest of all pretensions. A great deal has already been said concerning this abuse of medical charity, and many propositions have been advanced with a view of checking the evil, but with little avail. The very civilization of the human race which has made charity necessary, has stimulated the growth of the abuse, so that, as an evil, it has taken root into every grade of society.

To blame the profession for much of this state of things appears at first rather startling, but we believe that the charge can be fairly substantiated. We would be outraging the finer feelings of our humanity were we to assume that no real charity is performed by our profession, that no benefits are conferred upon the poor for the sole pleasure and satisfaction derived from their performance. There is a great deal of this charity, a great many services having a right to the name which are as conscientiously rendered as those of the true Samaritan of old. All this is well enough as far as it goes, but we are sorry to say that too many have gone further in the use of their privileges and in the performance of their duties, and have laid themselves open to the damaging suspicion that too much is done for show and selfish interest.

It has often occurred to us that there is altogether too much said by ourselves about the charity of our profession; that if the public is not aware that we possess and exercise the virtue, it has certainly been no fault of ours. The public hear so much of our charity that they are beginning to think that they are conferring a favor upon us by giving us an opportunity to exercise our propensity in that respect. We not only tell them of our Samaritan virtues, but are too much inclined to force their exercise upon the people. This disposition is seen in the struggle for hospital and dispensary appointments. If a new dispensary is founded, or a new hospital projected, the most strenuous efforts are made to secure a place on the medical staff, and the trustees are at once impressed with the belief that of all the services that can be rendered to the institution, the purely professional ones are the cheapest. The public are not backward in having the same idea. No sooner are these institutions opened than every facility is offered to the public to avail themselves of the privileges; and if all other means fail to make a show of patronage, regular advertisements are issued for patients. These institutions must make a show of a number of patients treated, else there will be no reasonable excuse for their establishment, and no encouragement to the benefactors. It is easily seen that this very system encourages an abuse of charity which the medical profession directly abet by the very eagerness with which they serve these so-called charities.

Many medical men go still further, and, we are sorry to say it, under the cover of charity, found institutions for the study of a specialty and advertise for patients in the daily papers. We have known of more than one institution of this sort where patients were actually coaxed to come, that the number of applications might prove it to be prosperous, and offer an excuse for seeking an appropriation from the legislature. In view of this state of things, is it right to assume that none but the pure charity-patient was treated? Is it fair to presume that, under the circumstances, even ordinary measures were taken to guard against fraud on the part of the applicants?

It is laudable to use every legitimate means to study disease, to enlarge observation and increase experience; but the manner in which practice is carried on in many of our public institutions is not legitimate. A few who may hold positions are, in reality, advancing themselves by damaging the pecuniary interests of the majority of their brethren. Many do so thoughtlessly, but the results are none the less detrimental. In a medical centre such as New York, there is always a struggle to develop an interest in clinical teaching, and a desire to have the clinic rooms of the various colleges well filled with interesting cases.

This is as it should be, and so far as due care is taken to exclude the unworthy applicant, nothing but good can come of it. But is this care always taken when a particularly interesting case presents itself?

In view of this, is it a matter of surprise that the unprincipled class of the community will be backward in availing themselves of advice so freely, in fact gladly, bestowed? We have known of gross impositions being practised in this way. Not infrequently patients of other practitioners—patients well able to pay a fee—will apply to dispensaries, clinics and infirmaries, and get advice and operation without any hindrance whatsoever. Especially is this the case with well-to-do patients living out of town.

Not long ago, in conversation with a patient upon whom an operation for artificial pupil had been performed by a celebrated oculist in New York, we were surprised to hear that the said operation had been performed for charity at the Eye Infirmary. When asked why he did not consult the surgeon privately at his office, the simple reply was, that it was not necessary when he could so easily obtain the same advantages for nothing at the Infirmary. We have heard of several cases of this sort, who, having capital operations performed for nothing in New York, are exceedingly reluctant, when returning, to pay the ordinary and modest fees of the rural practitioner. The surgeons, by want of care in treating the cases at the institutions, are thoughtlessly offering a premium on dishonesty. We are aware that there is often considerable time consumed, and trouble to be taken, to separate the fraudulent from the worthy recipient of charity; but this time and trouble should be taken in the cause of charity, and in the true interests of the profession. The majority of the gentlemen connected with our clinics and infirmaries have substantial incomes from their practice, and to them personally the occasional cheating of a fee does not amount to much; but they should look beyond this, and, as a matter of honor to the young and struggling practitioner, take ordinary pains to prevent fraud. The young physician is, after all, the real sufferer; the fee which might be scorned by his well-to-do brother would be a godsend to him. He is contented with a little; and why cannot the dispensary and infirmary attendants make an effort to throw that little into his hands? The connection with a hospital, infirmary, dispensary, or college clinic has many advantages, which to the holder are more than counterbalanced by the disadvantages of a forced attendance at certain times. Personally the advantages may perhaps be incalculable, but each gentleman holding such a position is bound in the discharge of his duties to consider somewhat the interests of those who may not be so fortunate. The advantages of the very name of being connected with a hospital, the opportunities for experience and practice which such a connection may give him, are great, and if properly used science can be advanced, charity served, and the best interests of the profession promoted.

Although the profession can do much to prevent fraud, they cannot do everything when unaided by the authorities of the institutions. In many instances the action of members of the medical staff, in refusing to attend to certain pretenders, is upheld; but in many other instances what is conventionally styled "the interests of the institution" interferes. It is true it is intended to be understood that none but paupers are admitted, or such as are only able to pay a certain stipend for board; but, generally speaking, no objection is made to a patient if he conforms to all the pecuniary requirements made of him. The fact is, that many of the hospitals are too much in want of money to refuse any one who is willing to pay the required board; for some reason best known to the authorities, no further questions are asked. Every medical man can recall cases in which patients are able to command the best rooms and the most expensive luxuries, private nurses, and the like, and so long as they pay for these they have the advantage of medical services gratis, under the cover of charity. These are cases in which the attempts to cheat the profession of legitimate fees are too open to admit of question. And yet the practice is tolerated in all our large institutions, the authorities of which appear, by this open defiance of ordinary justice, to own the medical staff body and soul, by compelling them, on pain of jeopardizing their positions, to attend these patients the same as if they were deserving paupers. Now we claim that there is in this way of doing things a little too much of institution and too little of doctor. But can we expect anything more of managers who are made to believe that medical men are so eager to give their services to these charities that they will resort to all sorts of intrigues for influence to obtain positions, and all manner of subterfuges to retain them afterwards? The supply of medical men is so much greater than the demand, that directors and managers can afford to be independent. Such is the only explanation for the paradox that the most useful men to the institution are the ones who have the least to say in its general management, and are servants to all.

Some of the hospitals, not satisfied with making their expenses in this way, have dared to go farther in their unfair dealings towards the medical staff. Not only have they received patients well able to pay medical fees, but they have made an extra item in the patient's bill for medical services, which services as an institution they received gratis! As an offset to such a practice it is the rule that no physician or surgeon shall use his position in the hospital for the sake of making money. Under the circumstances just mentioned we fail to see where the justice of the arrangement is. The doctor is not a hireling of the house, but in the relation to it of a benefactor, and if any attempt b

made to remunerate for medical services, pure and simple, to whom do they legitimately belong? If the doctor dare not expect such rewards, what interpretations can we give to the right of the hospital to demand them?

In view of a state of affairs like the above, it is in vain to look for much help from hospital authorities towards correcting abuses of medical charity: all we can do in a professional way lies in ourselves. We cannot cure the evils, but we can do a great deal towards preventing them. It may not be possible to overturn the present hospital management, but there is much to be done to make the managers feel the worth, influence, and power of the medical staff, and by the right sort of action, desirable reforms can be instituted. In dispensaries, physicians are in a more independent relation to the authorities, and can exercise an almost absolute right to refuse aid to the undeserving. Much more is this the case in our college clinics. We are by no means jealous of the amount of real charity done to the poor of New York, but we do not care to have it overdone. When a profession can claim to treat gratuitously three hundred thousand paupers annually in New York city, not counting those in hospital, and it knows at the same time that one out of every ten of the young medical men in that city can barely earn a living, we think it is about time to look into the matter, to consider whether the occasion is not opportune for proving the force of the proverb, "Charity begins at home."

INDEPENDENT JOURNALISM.

Few medical journals have been started without professing at the outset to be entirely free and untrammelled by any undue or unethical influences.

It is notorious, however, that there are few in this country which do not derive some pecuniary support from giving whatever influence they may possess, directly or indirectly, to some college or prominent physician or physicians; few which consider they can afford to refuse a profitable advertisement, when they can obtain it by bestowing upon its subject a laudatory editorial, or insert somehow in its columns a commendation of it.

From time to time we have noted this growing evil in medical journalism, and now desire to call the attention of the profession, and particularly of editors, to the advertisement of "Cincho-quinine," to be found in so many medical periodicals at the present time. A condition the proprietors of this article attach to its advertising is, that the journals with which they contract shall insert quite a lengthy extract from the *Boston Journal of Chemistry* (published by them), descriptive, etc., of the preparation. Of "Cincho-quinine" itself we have nothing to say, for or against; our desire is simply to protest, for the respectability and purity of the medical press, against *selling* their columns, with their advertising pages, to any person or for any purpose, good, bad, or indifferent.

Reports of Societies.

MEDICAL LIBRARY AND JOURNAL ASSOCIATION.

Dr. John C. Peters, President, in the Chair.

CANCER OF THE FEMALE BREAST. ITS CHARACTER, DIAGNOSIS, PROGNOSIS AND TREATMENT.

Professor Willard Parker remarked as follows:—

In the latter part of the last century the man who was particularly connected with the study of this subject, cancerous tumors, was Dr. John Abernethy. Previous to his time, our knowledge upon this subject was in a state of confusion. So completely and successfully did he study this subject of tumors, that, in his time, the results of his investigations were regarded as the *ultimatum*. They were so generally accepted by the profession, that whoever was familiar with what Mr. Abernethy said upon the subject, was supposed to know all that could be known about tumors. These results of the investigations of Mr. Abernethy continued to control the minds of the profession, to a very great extent at least, until perhaps the last twenty-five years. Since that time great changes have taken place, which have grown more particularly out of investigations arising from the use of the microscope and from the researches of the histologists.

The first great departure was introduced by Bichat.

Bichat was the father of general anatomy, and was one of the brightest examples of a thorough scholar that France has ever produced. It was by the influence of his study that the human body was divided into its different systems—the muscular system, the vascular system, the nervous system, etc. In connection with his great work, the study of general anatomy, he took up the study of tumors. In his studies upon that subject, he observed that tumors were growths in the body, abnormal in character, that some of them had a character analogous to the original natural tissues, and that others varied somewhat from the original natural tissues. He observed, therefore, that there were two classes. One *like* the original normal structure, and the other *unlike* the original normal structure, and had a structure *sui generis*.

Bichat died in the year 1802. His pupils, Dupuytren, Andral, Cruvelhier, and others, seized upon this idea which Bichat had advanced, and made the two great classes of tumors with which the profession has been so familiar since their time. They divided tumors into two great classes, one which embraced that class of tumors which were composed of a structure analogous to the natural structures of the body, which they called homologues or homoplasts, and another which embraced that class of tumors which were composed of a structure which found no analogy in the body, which they called heterologues or heteroplasts. They farther observed that the first class were almost always mild in their effects, easily controlled by treatment, and they received the additional name of benign. They also observed that the second class were very apt to destroy life, sometimes very rapidly, were not easily controlled by treatment, and they received the name of malignant. This division of tumors was persisted in for a long time by the French, and it has been in France that the strong advocates of this classification have arisen. In the latter part of the life of Velpeau, that great surgeon began to question this matter of homology and heterology, as the terms had been used in this connection, but his studies and researches

assumed no definite shape. The next class of men who attempted to give a solution to the question, What is cancer? were the chemists of France, and of these there were Thenard, Lassaigne, Vauquelin, and others of equal ability. These men made a careful analysis of cancer, with the view of discerning, if possible, something peculiar to cancer: something which perhaps might receive the name of *carcinomatine*, a distinct and fixed substance, the presence or absence of which might always enable us to say whether cancer was present or absent. After a long and careful research, they found that their labors were unsuccessful, and the work was allowed to pass from their hands, and it fell into the hands of the histologists. This class of observers have been diligent in their study, and faithful in looking for some change or modification of the cell-products, shape of cells, or presence of peculiar elements, by which they could distinguish cancer. For a long time it was thought that they had succeeded in making the desired discovery, and the announcement was made that the essential element in cancerous growth was the presence of a certain shaped cell, which was immediately denominated the "cancer-cell." This announcement was very generally accepted by the profession as a solution to the long and vexing problem. It is only a few years since we all had faith that the so-called "cancer-cell," or morphosis, something distinct and definite in its character, which had been found, would enable us to determine whether any given growth was cancerous in its nature, or whether it was not cancerous in its nature. But the truth is, we now know that no one cell at present can be fastened upon as absolutely representing cancerous disease.

The "cancer-cell" theory belonged to the French.

The Germans, on the other hand, never acceded to this proposition, and for some time there was considerable discussion between French and German scholars upon this question. Among the Germans who engaged in this discussion were Virchow, Rokitansky, and others, who have since become preëminent in their profession. The study of this subject, however, has been followed up by Virchow particularly, and now we have the result of his investigations formulated and presented to us in his great work upon the pathology of tumors.

First of all he lays down the proposition that everything proceeds from a cell—

"*Omnis cellula e cellula.*"

For a time his opinion was that the embryonic connective-tissue cell had the power of proliferating the cancer-cell, that is, that the connective-tissue cell could produce a cell like itself, and also a cell of a different character, which was the cancerous product. But it now seems to be settled that like only begets like, and the doctrine that the connective tissue is capable of proliferating a cell of a distinct character, which can be the cancer-cell, is regarded as not being tenable.

The doctrine is now, that the true cancer, so far as we rely upon the cell, is made up of cells which are of the epithelial type.

Failing to discover a peculiar cell by which cancer was to be recognized, both histological and pathological observers have at present settled down upon the point that true cancer is to be recognized by certain peculiarities in its anatomical structure. That is, we have in the first place a stroma made up of connective tissue; that in the interstices of this connective tissue, denominated alveoli, are deposited cells; that these cells are of the large, nucleated variety, and have for their prototype the epithelial cell. The presence of this anatomical arrangement is now regarded as evidence of the presence of true cancer. In other words, that nearly all cancers, if not all, have their origin in epithelial structure. This portion of the subject is one of great interest, and it is to be hoped that, at some future period not far distant, the histologist and the pathologist, by aid of the microscope and other means which they have at their command, may be able positively to determine and settle the question as to what changes have taken place in the growths which we now call cancerous. Virchow, pursuing the study still farther, as relating to the clinical history of these growths, has given us several stages.

1. The stage of development or local irritation.
2. The stage of granulation.
3. The stage of differentiation. That is, from being an apparently homogeneous structure, some of the cells go on to make muscular tissue, epithelial structure, etc.

Of these varieties of cells he distinguishes four; that is, cells which are to appear in four different kinds of structure.

1. Connective tissue.
2. Nerve structure.
3. Muscular structure.
4. Epithelium.

Continuing the stages he makes

4. The stage of maturity.
5. The stage of retrograde metamorphosis, or the stage when it has attained its maximum growth, and begins to retrograde and die.

This process may take place by ulceration, suppuration, adipose change, and so on.

This embraces all the general remarks I have to make on the question, What is cancer?

Now, with regard to cancer of the female breast. There is hardly any organ in the human body so frequently the seat of this disease as is the female breast. Of course when cancer involves any important organ in the body it becomes the object of great solicitude on the part of the patient and the friends, and on the part of the surgeon a source of great anxiety, and, I am sorry to say, without any satisfactory results attending his efforts to give permanent relief.

In the first place, with regard to its frequency. Upon this point we have some very instructive tables furnished us by a French surgeon, who made his collection of cases during the eleven years immediately subsequent to the year 1830. The whole number of cases he collected, of all kinds, was 9,119.

Of these 4,222 occurred in organs peculiar to the female sex, and only 48 occurred in organs peculiar to the male sex. This is in the proportion of 88 to 1. The reason for this extreme difference in frequency in the two sexes is not known.

Of the 4,222 cases which occurred in women—

2,996	cases	occurred	in	the	uterus.
1,147	"	"	"	"	mammæ.
64	"	"	"	"	ovaries.
15	"	"	"	"	vagina.

Of the 48 cases which occurred in men—

21	cases	occurred	in	the	testes.
10	"	"	"	"	penis.
7	"	"	"	"	scrotum.
5	"	"	"	"	prostate.
5	"	"	"	"	pap.

A remarkable feature of these observations is that so few occurred in the ovaries.

I propose now simply to refer to the cases which have fallen under my own observation. These are

cases which I have either treated myself, or have seen in consultation. These observations and notes extend over a period of about 40 years, but the larger portion of these cases have occurred within the last 20 years.

I have upon my tables the record of 295 cases.

In making up these tables I have taken into consideration the following points:—

(1), Date; (2), name; (3), age; (4), civil condition, married, single, or widow; (5), No. of children; (6), which breast was involved; (7), family history; (8), personal history; (9), diagnosis, prognosis, treatment; (10), subsequent history.

First, with regard to age:—

Average age	$48\frac{7}{10}$ years.
Oldest	86 "
Youngest	28 "

CIVIL CONDITION.

Married	190
Widows	53
Single	34
Unknown	18

NUMBER OF CHILDREN.

Mothers	186

BREAST.

Right breast	107
Left breast	130
Axilla involved	71

It will be noticed that there is a difference of 23 in favor of the right breast. I have also found that the same result has been obtained upon this point by other observers. I can assign no reason why its occurrence should be so much more frequent in the left breast than in the right.

FAMILY HISTORY.

Cancer taint	28
No cancer taint	208
Consumption	35
Consumption and cancer taint	5
Unknown	36

It will be noticed here that by far the larger portion occurred in persons who had no history of cancer taint. So far, then, as my tables go, they prove that cancer is not a hereditary disease, which is contrary to the opinion I had always entertained previous to a more thorough examination of the question.

PERSONAL HISTORY.

Blows	38
Injury from breastpump	1
Injury from tight dress	2
Inverted nipples	2
Uterine sympathy	19
Mental anxiety	45
Commencing benignant (op. 17)	31
Commencing malignant, but living long (op. 14)	15
Sloughing and living long (op. 3)	6
Cystic (av. age, 57¾; oldest, 72; youngest, 33)	9
Metastatic	3

With regard to the 19 cases which occurred from uterine sympathy, they belonged to that class of cases which formerly were called the irritable tumor of the breast. These cases not uncommonly occur in connection with dysmenorrhœa, and the leading symptoms are swelling and pain in the breast and nipples before menstruation.

I wish to call special attention to the 45 cases marked mental anxiety as a cause for their development. I believe this to be an important point in connection with the development of cancer in the female breast. I believe it is very rare for cancer to present itself where everything passes pleasantly and prosperously in life, and cheerfulness at all times surrounds the individual. I find, in many cases, that the development of cancer dates at something which has caused mental anxiety, such as loss of property, loss of friends, long-continued sickness in families, giving rise to great mental solicitude and physical fatigue, etc., etc.

In addition to the above general features, I find that I have the record of 31 cases which began as benign tumors. In this class of cases the tumors had been carried from 10 to 30 years without inconvenience, but suddenly, from some cause, mental anxiety being a prominent cause, these tumors commenced to grow rapidly and assume a malignant form. One of these cases I now recall, in whom the tumor had existed from early womanhood. That lady was married when 20 years old, bore two children, her husband was prosperous in life, but suddenly distress in life came from reverse in fortune; and during these dark hours in her history, the tumor took on changes which developed into a rapidly advancing cancerous growth. The tumor was twice removed, but no permanent relief ensued.

Another case was one in which the patient carried the tumor 35 or 40 years without inconvenience, when suddenly the tumor took on new action, and the woman died from the effects of cancerous disease within six years from the time of the manifestation of this new action.

I have another group of cases which began as malignant. They are 15 in number. Of these cases, 14 were operated upon, and remained non-progressive for a long time. These are the cases which have afforded the greatest success in treatment. The following is a condensed statement of the history of these cases subsequent to the operation:—

1. Lived 12 years, and died with cancer of liver.
2. At the end of 27 years was in fair health.
3. Lived several years, and died from accidental injuries.
4. Patient well 22 years after operation. The patient had an issue made in the arm.
5. Lived 36 years, and died of other disease.
6. Patient well 5 years after operation.
7. Patient well 8 years after operation.
8. Patient well 10 years after operation.
9. Patient was operated upon in 1856, disease returned in 1873, but is not active.
10. Living and well 20 years after operation.
11. Living and well 3 years after operation.
12. Lived 7 years after first operation. This patient had the second operation.
13. Patient living in 1873, 10 years after first seen, and she had no operation.
14. Disease returned 2 years after operation, after great depression of spirits.

I have another group of cases which took on the sloughing process; those in which ulceration and sloughing took place rapidly and continued.

In this group are six cases. Of these, three were operated upon and three were not.

Of the cases in which no operation was performed—

1. Three years' duration, and patient lived 6 years after the sloughing commenced.
2. Nine years' duration, had been ulcerating 3 years, general health unimpaired.
3. Thirty-eight years' duration, and had been sloughing for 10 years.

Of the cases in which operation was performed—

1. Lived 5 years.

2. Operation 12 years ago, patient still living.

3. Patient well 10 years after operation.

This last case was indeed a most remarkable one. When first called to see the lady, I found her in what was apparently an exceedingly unfavorable condition. There was a large sloughing, cancerous mass upon the thorax, which filled the house with the most terribly disgusting odors which emanate from such sloughing masses. The glands in the axilla were not involved. There was no trouble above the clavicle. Operation was resorted to, simply to relieve the patient of the presence of this mass of death. There was no promise whatever of hope in the case. The operation was performed ten years ago, and the patient is still living and in good condition. These sloughing cases, when the surrounding parts are not involved, are to be regarded as favorable cases for an operation, rather than unfavorable. The fact of sloughing should have but little weight in deciding for or against the operation, but if anything, it is to be regarded as favorable.

Another group of cases of which I have taken note belongs to the so-called cystic variety.

Of these cases I have nine. Three of these cases were operated upon, but only one is now known to be living. In that case, cancer taint was present in the family. The patient is now living, ten years after the operation. What is meant by cystic cancer is, that they are tumors containing fluid, and the walls of these cysts or the walls of the tumor contain cancerous structure.

These cases are quite favorable for operation. The common cause for their occurrence is blows.

There is another class which has been denominated metastatic cancer. Properly speaking this term does not express what is understood by these cases. What is understood by the term is, that the disease has ceased its activity in one organ of the body and made its appearance in some other organ of the body. The organs most commonly affected in this way are the uterus and the mammæ.

One case I call to mind, as illustrating this change, occurred in a woman who had cancer of the breast at the age of 54, which subsided in its growth, and at the age of 76 it appeared in the uterus, and was there the immediate cause of the patient's death. I have seen two of these cases in which the transition of the disease was from the breast to the uterus, and one in which the transition was from the uterus to the breast. As a general rule, the constitutional disturbance in these cases is but little, and the patients are generally able to attend to the common duties of life apparently in a very comfortable condition. I will now say a few words with regard to the

FORMS OF CANCER.

Of these we have, speaking particularly of the breast—

First.—Those beginning as a tubercle in the skin.

Second.—Those beginning as an ulcer on the nipple. These begin very much as does the epithelial cancer of the lip.

Third.—Circumscribed. This form occurs more commonly in young persons, usually in fat persons, and is of rapid development. Sometimes this form involves one lobe, sometimes several lobes of the breast, and is something corresponding to the so-called encephaloid form.

Fourth.—The infiltrated form, or schirrus. This usually returns very soon after operation, very rapidly involves the lymphatics, and is seen very often in the skin. The disease makes its appearance in the skin in the form of small lenticular masses, sometimes called tubercles in the skin.

Fifth.—Cystic. This form is usually found in persons past the middle period of life.

Sixth.—The sloughing variety.

DIAGNOSIS.

Under this head I shall say but very little, for the manner of arriving at a positive diagnosis in these cases you are already familiar with.

I will simply remark, in passing, that the first form, the tubercle, is sometimes mistaken for syphilis. In the skin the appearance is very much like the epithelioma of the lip. The third form is very apt to be mistaken for *fungous hæmatodes*. It is perhaps as near to fungous hæmatodes as occurs in the breast. The fourth form is usually recognized by the pain and retraction of the nipple. The fifth form might raise the question of hydatids of the breast. Hydatids of the breast are exceedingly rare. I have never seen a case. When I find a smooth tumor in the breast filled with fluid, I regard it as being either of the encephaloid or cystic variety of the disease, and the diagnosis between these two is sometimes difficult. The presence or absence of fluctuation and the microscopical evidence are the most reliable.

PROGNOSIS.

First.—Prognosis is always unfavorable.

Second.—In tumors commencing benign, prognosis is most favorable.

Third.—In sloughy tumors prognosis more favorable after an operation.

Fourth.—In cystic tumors prognosis is more favorable for an operation, and removal of the tumor is advised.

Fifth.—In tumors which commence malignant the patients usually die within two years. Sometimes they continue a little longer. Yet of tumors commencing malignant I have 14 cases where the patients lived many years after amputation of the breast.

Sixth.—Prognosis may be affected somewhat by the method of treatment employed. Hence we have prognosis after compression, electrolysis, caustics and internal treatment, and these will be more particularly spoken of under the head of

TREATMENT.

With regard to treatment, again, I have not much to say. The methods employed may be embraced under the following heads:—

1. Amputation; 2. Caustic applications; 3. Compression; 4. Electrolysis; 5. Medication; 6. Moral treatment.

In the superficial cancer of the breast it is very well to use caustics. The same thing may be said with regard to cancers upon the face. The treatment with caustics in that region is good surgery. When the tumor is situated to any extent below the surface, the idea of caustics is bad surgery.

In two cases which have come under my observation, one died within four days, poisoned by the material used for the caustic application, and the other never reached her home alive.

With regard to the treatment by the use of compression, compressed sponges being usually employed, I have seen no good from it.

With regard to electrolysis, I have seen nothing in it yet to give me any confidence whatever in its use. I have nothing, however, to say against its use. There may be something of value in it, and it should be thoroughly tried. The day was when no knowledge was

had with regard to a successful method for the treatment of syphilis, but now we know that by the proper use of proper remedies, that disease can be cured, and charlatanism has left that field almost entirely. With regard to the internal treatment of cancer, I believe very much in it.

INTERNAL REMEDIES.

I believe that the day must come when something will be accomplished by the aid of internal remedies. Of the remedies now used, arsenic is perhaps the one which commands my confidence more than any other. There is another point in the treatment of cancer which I conceive to be of great importance, and that is the moral condition of the patient. I believe that it is impossible to cure our patients of cancer unless they are buoyed up by hope. Their surroundings should be of a character that will give them the greatest possible amount of comfort and happiness. Keep them in the sunlight of enjoyment, for darkness is the soil in which cancer flourishes.

THE QUESTION OF OPERATION.

Now we come to consider an important question: Do we accomplish any good by operations?

There are some who say, never operate. I think this opinion comes from the older members of the profession, who are inclined to look beyond the simple performance of the operation. The younger men, many of them, say operate. Upon this question I perhaps can do no better than to refer you to the opinions of two men who are among the most experienced of the profession, and who have had abundant facilities for making observations. I refer to Paget and Sibley, both of London.

Mr. Paget has shown, from his statistics, that the average length of life after an operation is 43 months, and that the average length of life without an operation is 55 months. Mr. Sibley has shown from his statistics that the average length of life after an operation is 53 months, and that the average length of life without an operation is 32¾ months. Here are the results of observations made by two distinguished authorities. I think all that I am justified in saying upon this point is, that every case must be taken by itself, looked at with all its surroundings, before a decision is given either for or against an operation.

The dangers in an operation are not great, if it is decided to perform it.

The following may be regarded as the indications, when attempting to decide upon any given case.

The older the patient, other things being equal, the more favorable for operation. If the cancer has extended so that we have secondary cancer, it is not surgical to operate. Therefore, when the axillary glands are involved, or when the skin is involved, and we have the local and constitutional disease both existing, I regard it as unfavorable for an operation. When the tumor is isolated, and there are no secondary manifestations, the conditions are favorable for an operation, and the sooner it is performed the better is the chance of preserving the life of the patient.

If a patient comes complaining of an irritable tumor of the breast, apparently connected with some disorder of menstruation, I should recommend, first, careful attention to the general health; and second, if found increasing in size, to remove it at once. There is another condition in which I would operate, and that is in the sloughing cases. Then it is done simply to make the patient more comfortable. Practically speaking, these cases do not belong to secondary cancer, and the operations are not unfavorable. But with all these cases we must use our own discretion. Select the cases, and give them the benefits and advantages of an operation.

Now a few words with regard to the hereditary character of cancer. In the cases which are found in my tables, the cancer taint was present in only 28 of the whole number, 236, whose history upon this point was obtained.

Within the last year I have been examining the Register's Bureau of Statistics in this city, and I find, in a period of time extending over about 70 weeks, there were only 532 deaths from cancer of all kinds and in all organs, while from pulmonary consumption alone there were 6,219 deaths, or as 1 to 11½. When compared with Bright's disease it is found that about three times as many die from that disease as from cancer. From the statistics of the Register's office for the last five years, the following proportion of Americans and foreigners who died of cancer are found:—

Americans, 68; foreigners, 154; negroes, 5. Savages rarely have the disease.

It would seem as if this disease of the breast is found in certain conditions of life, and that in these conditions it is upon the increase.

Without pursuing the discussion of this subject farther, I will close by saying, that the conclusions to which I have arrived are chiefly as follows:—

1. That the disease is not hereditary, or if so, only in a very limited degree.

2. That the disease begins as a local disease positively and purely. It becomes constitutional, just as syphilis begins a local disease and becomes constitutional.

3. That the disease occurs in those of vigorous health, instead of being connected with those conditions in which consumption occurs.

4. That cancerous parents may beget tuberculous offspring. That is, feeble constitutions arising from the effects of cancer will not beget cancer, but the diseases which follow in their line are tuberculous.

5. That the moral condition has a powerful influence on the development or the prevention of the development of cancer.

6. I am very forcibly struck by the parallelism and analogy existing between cancer and syphilis. Both begin by local irritation. Syphilis is inoculable, but cancer has not been proven so to be. In this respect they differ from each other. We have secondary syphilis, and we have secondary cancer. We have tertiary syphilis, but perhaps it cannot be said that we have tertiary cancer, unless it can be said that cancer is tertiary when it affects the bones, as it sometimes does.

In conclusion, I have to say, that we must not give this subject over as an unprofitable one for study and observation. Many diseases have run rampant which finally have been made to yield to treatment, and we may hope that the same thing may yet be accomplished with reference to cancer. The work of the histologist and pathologist may yet bring us into the light, and the day may come when we can say of cancer, as we now can say of syphilis, It can be cured.

DR. FORDYCE BARKER: Mr. President, my apology for departing from my usual rule with regard to surgical questions and operations is, that I may perhaps suggest some new fields for inquiry and observation, and perhaps bring out some new ideas in the course of the discussion by these suggestions. In regard to surgery, I am no expert. I do not pretend even to interfere with it, and it is therefore somewhat embarrassing to speak upon a subject which really belongs to the surgical department. I have, however, had occasion to study the subject of cancer with great interest, and perhaps with a large experience, and have, therefore, for many years

taken every pains to inform myself with regard to the progress of science, and have felt an interest in its bearing upon the question of its manifestation in the form in which it occurs secondarily, which in its most frequent form is in that of cancer of the breast.

In alluding to certain points in connection with the general subject, I will refer to one or two cases in connection with my own personal experience. Previous to my coming to this city, I was obliged to practise more or less in general surgery, and in the course of that time I was called upon to amputate the breast thirteen times, for what I supposed to be cancer of that organ. I have listened to the statistics from the gentleman who has already occupied your attention, with great interest and with great pleasure, because, in almost every point, while they have not corresponded with published statistics as we now have them, they have corresponded with my own. In four of these thirteen cases in which I operated for cancer of the breast, I know nothing of the results. Two of the thirteen cases are still living. All of the seven remaining cases died at periods varying from eighteen months to four years after the operation. A curious point in relation to them was, that the one who lived the longest—and this point I have not seen alluded to by any author—was the patient who was the oldest. That patient was 71 years of age when I operated, and had been afflicted with the disease some four or five months when I first saw her.

There was no apparent return of the disease until several months afterwards, and then there was probably a return of the disease to some internal organ. The point is this: whether the progress of pathological changes is not exactly in the same ratio as the metamorphosis of tissue in relation to age; whether in persons of advanced life we may not account in this way for the longer exemption from a fatal termination of the disease than when the disease occurs in those who are less advanced in age.

In 1858, although I had refused to have anything to do with general surgery, and confined my operations entirely to the obstetrical department, I had one patient who absolutely refused to permit any one else to operate upon her except myself. I accordingly removed her breast. The axillary glands were not involved, but the disease returned within a very few months, and the patient died eleven months after the operation.

The second case which I will refer to is a rather curious and rather exceptional one. It occurred in the year 1860, in a lady 43 years of age, and she had had the disease for several months when I first saw her, and in what I regarded as a very malignant form. That person, again, utterly refused to have an operation performed unless I would perform it myself, and I accordingly performed the operation, assisted by Dr. Foster Swift and Dr. Charles Phelps. In that case acupressure was employed, as I believe, for the first time in this city, and I was very much interested and pleased with the effect of acupressure in diminishing the amount of suppuration, which in that case was very slight indeed. That patient was operated upon in April, 1860. In my own belief, and in the belief of the microscopist, it was one of the most malignant forms of this disease of the breast, and yet the woman was alive in 1871. I simply mention this case as a small contribution to the number of successful operations, in the sense of curative, in cases of carcinoma of the breast. That specimen was afterwards presented at the New York Pathological Society, and the minutes of the meeting, which were published in the MEDICAL RECORD, represented it as being presented by Dr. Swift, and that the operation had been performed by Dr. Parker, which is a fair illustration of the uncertainty of surgical glory. With regard to statistics in determining whether a surgical operation shall be performed or not, most modern writers agree that operations do, in a certain proportion of cases which are judiciously selected, absolutely and positively prolong life, relieve suffering, and in some cases actually save life. The diametrical opposition which the statistics of some surgeons have to those of other surgeons who are equally well situated for making observations, may perhaps be explained in this way. One surgeon may be of the opinion that the disease is, primarily, always a local disease, and that its constitutional character is secondary to the local disease, which manifests itself differently in different cases. If this theory be correct, the proper method of treatment is the early extirpation of all suspicious-looking growths. On the other hand, other surgeons are of the opinion that the disease is a constitutional disease; that operations are deleterious in their effects, and should not be resorted to until all other means have failed to arrest its progress.

Again, some surgeons who have a greater fondness for operations than others, will remove a suspicious-looking growth much earlier than those surgeons who are less fond of operations, so that in some cases it may be that the delay in the performance of the operation has permitted the disease to make such extensive ravages upon the general system, that the operation, if performed at all, can only be performed with the expectation of giving some relief from distressing symptoms.

I began in early life as a most enthusiastic believer in the numerical system, regarding it as a most efficient means for advancing our knowledge of disease. But my experience has proven to me that statistics which ordinarily receive publication are extremely unreliable, and that they form a most unstable foundation upon which to predicate future action, whether it shall be for the formation of an opinion or made the basis of an operation. The statistics which the author of the paper has given us relative to the comparative frequency of cancer of the breast singularly accord with the statistics taken from the cancer hospitals in the city of London. Out of 7,800 cases which were under treatment in that city between the years of 1851 and 1861, 4,388 were cancer of the breast. This is from an entirely different sphere of observation, and yet the result of the observation shows that the female breast is one of the most favorite places in the human body for the development of this disease. It seems to have an elective affinity for the female breast, and perhaps in the progress of etiology and the science of physiology the reason for this elective affinity will be discovered.

The next point which I will notice in connection with the paper, is with regard to hereditary predisposition to the disease. I feel quite confident that I should never have read a paper which I did read, and which was published by the Academy of Medicine, upon "The Clinical Study of Cancer of the Uterus," had I not been thoroughly convinced upon this point. When I came to study my own observations, I found that some of them were so different from the published statements in published works that I felt doubtful about reading them without consultation with some of my personal friends. My own statistics with regard to hereditary predisposition to cancer of the uterus almost exactly correspond to the observations of the author of this paper with regard to hereditary predisposition to cancer of the female breast.

Another very interesting point to me was, that the

author of the paper has found so much larger proportion of cases of cancer of the breast where hereditary predisposition to cancer was entirely absent, but where hereditary predisposition to tubercles was present. The results of his observations upon this point give the same relations which are found in my own statistics, and I believe that the idea of hereditary predisposition to cancer should be denounced, and that this denunciation should be pronounced boldly by physicians.

There were a few points to which no allusions were made, and concerning which I wish to make some inquiry.

What is meant by a cancerous cachexia? In my earlier experience I was always looking for something like a cancerous cachexia, but my later experience and observation have taught me to become a non-believer, and I do not now believe at all in cancerous cachexia, as the term is commonly used. I have seen patients in the most advanced stages of cancer of the uterus, and in almost all its various phases, when they presented the appearance of robust health. The cachexia, when it does appear, is to my mind not a measure of the influence which has been produced by the simple presence of cancer in the system, but rather from associated lesions of the various organs of the body.

These are my observations with regard to cancer of the uterus, and I should like to know whether the same thing has been observed with regard to cancer of the breast.

Another point which was not alluded to, and concerning which I should be pleased to gain some information—and that is, with regard to the value of pain as a symptom in cancer. I am of the opinion that it is a symptom of uncertain value in aiding us in determining the existence or non-existence of cancer of the uterus. I have seen patients in the advanced stages of the disease without the slightest suspicion having been raised with reference to the presence of the disease by any pain. My own opinion is, that pain is simply a measure of the influence which the disease has had upon the contiguous and adjacent tissues. Cancer may occur so as to interfere with the functions of the uterus, or affect the subperitoneal tissues; and when these tissues are affected we are sure to have pain, and in some of these cases the pain is most atrocious. In other cases, where the disease presents more malignancy, the pain is sometimes very trivial. Whether the amount of pain is in relation to the amount of influence which the disease has upon the adjacent and contiguous tissues, I am not able to say, but simply throw it out as a question for consideration.

From time immemorial there has been an attempt made to destroy cancer by the use of every variety of known caustics. It has been a favorite resort of empiricism, and the most successful and perhaps the most lucrative of all charlatanism has been seen in the use of caustic agents to destroy the local manifestations of cancer. As a consequence of this, of course, a great majority of the surgical world have been satisfied with regard to the uselessness of such attempts. My own prejudices have always been against this method of treatment. I once attempted to make some observations respecting this plan of treatment as it was then adopted in St. Bartholomew's Hospital, and the whole process was so revolting that I did not pursue my investigations farther, and the result of my observations was not at all favorable.

In the year 1870, however, I was consulted by a lady who had a tumor in the breast which was very suspicious in its character, and which I watched for some weeks, when I regarded it as cancer, and urged upon my patient the importance of having it removed at once. But that patient utterly refused to have any cutting operation performed. At that time I had been studying up the subject somewhat, and among other works which I had read was Marsden's work upon the use of caustics in the treatment of cancer.

The same summer, while abroad, I visited the hospital in which Dr. Marsden had made his observations and applied his treatment, and saw the results of this treatment. I became so much interested in this plan of treatment, and was so highly pleased with it, that, upon my return, I recommended to my patient to submit to the treatment by the use of caustics. After some delay she consented. The form of cancer from which she was suffering was apparently of the most malignant type, and at the time I commenced the treatment the mass was about two inches in diameter, which is the extreme limit in size permissible to be treated by this method. In the course of eighteen days after the first application was made the mass came away, the process of cicatrization was completed in a short time, and there has not been the slightest appearance of return up to this time.

Another case to which I wish to make reference was in a patient who had had two sisters die with cancer of the breast, but her father and mother were still living at the time she consulted me. Not the slightest suspicion of cancer could be traced in either member of the family. One sister died some six or seven years ago from cancer of the breast. The other sister I was called to visit, and I found the axillary glands involved in the disease; there were evidences of what is known as the cancerous cachexia, and I called for counsel. Dr. Van Buren was called in consultation, but the case was regarded as utterly hopeless, and the patient died without an operation.

The third sister came under my observation for epithelioma of the uterus. That patient I operated upon in 1866, removing the cervix uteri by amputation. It is now seven years since the operation was performed, and she remains in the most perfect health.

About five years ago a lady consulted me with regard to a suspicious-looking tumor in her right breast. She was under my observation for about two years, and received treatment, but I never was of the opinion that the growth was malignant. At the end of two years it entirely disappeared. In Feb., 1873, that patient came back to me with a tumor in her left breast, which I regarded as true cancer of the breast. The tumor had been observed for more than a year, and when I saw it, the nature of the case seemed clear and positive. Its removal was recommended. Consultation was held to satisfy the patient with regard to its nature, the propriety of its removal, and if decided to remove it, how it should be removed. It was decided to remove the tumor by Marsden's treatment, and the treatment was accordingly commenced upon the first day of April. The amount of pain which the patient has suffered during the course of the treatment has been very insignificant indeed. She has been up most of the time, has been able to be out riding some of the time, and it is now eighteen days since the first application, and the slough is just ready to come away. The treatment of this case thus far has been very pleasant. What the result of the case may be it is impossible at present to decide.

I will now describe the plan of treatment as given by Dr. Marsden—the plan which he professes to have derived great success from, not only in a very considerable number of cases of cancer of the breast, but in the treatment of cancer of various parts of the body and even of cancer of the neck of the uterus.

This method of treatment is limited to cases in which the surface of the tumor does not extend over two (2) inches. Care must be taken that the paste is of sufficient consistence so as not to flow beyond the point to which it is applied. The general formula for the preparation of the caustic is to combine arsenious acid and mucilage in such quantities as to make a thick paste, and the formula commonly employed for this purpose is—

℞ Arsenious acid ..... ʒ ii
Mucilage ..... ʒ i

This paste is spread over the surface of the tumor, and two or three layers of lint spread over that. The lint absorbs all the surplus paste and protects from farther cauterization. The first application is left on for twenty-four or forty-eight hours, according to the extent of surface, and then removed by gently soaking it with warm water. After the old paste has been removed in this way, one judges from the impression made with regard to a farther application of the caustic. These applications are to be continued until a line of demarcation entirely surrounding the diseased structure is shown. Then the lint is soaked and removed, and a bread-and-water poultice applied, and changed every few hours. At first there is sometimes considerable inflammatory action set up, but the amount of pain is very inconsiderable as compared with the use of the knife, and the process of cicatrization is equally painless and satisfactory.

The shock to the system, as a rule, is very much less. The constitutional effect of the arsenic in this case was very slight, lasting only a few hours, and then passed away. Indeed, the moderate constitutional effect of arsenic I have long believed to have a certain positiveness in the treatment of cancer, in that it retards the proliferation of cancerous tissue. I mention these cases with the hope that it may contribute something to our knowledge of means by which we may meet this most terrific disease.

Dr. Sands: Mr. President, I shall merely call the attention of the Association to a few points in connection with the nature of cancer, the classification of cancer, the etiology of cancer, and the treatment of cancer. I am more and more convinced, until surgeons can have the aid of the pathologists, until they can work together in the investigation of malignant growths, that but little advance can be made with regard to the important subject of the therapeutics of cancer.

It is a fact with which we are all familiar, that at the present time various kinds of tumors are removed from the body, and the most varying opinions are expressed with regard to these cases. It is not long since that I removed a female breast, and one surgeon who was present expressed the opinion that it did not need any microscope to enable him to determine that it was cancerous; but a microscopical examination proved it to be a case of pure adenoma of the breast. I think that most surgeons, as well as pathologists, are willing to give an anatomical rather than clinical meaning to the term cancer. The term cancer can no longer be considered synonymous with malignancy. All cancerous tumors are malignant, it is true; but, on the other hand, there are many tumors which are malignant in their nature, to which the term cancer cannot be applied, because they have not the anatomy of the tumors described under that term. Among these we have the sarcomata, myxomata, epitheliomata, lymphomata and some others. If we are to make any progress in our investigation of this subject of tumors, each tumor should be examined immediately, with the view of determining the true anatomical elements of which it is made up.

With regard to the etiology of cancer, of course it is very interesting and important to determine whether cancer is, or is not, a local disease, whether the condition of the patient is always consequent upon a constitutional taint, or whether it is simply a symptom incident to a local morbid state. Different views have already been given upon this point; and in favor of its being a local disease primarily, there is a degree of plausibility, when we go a certain distance. The occurrence of cancer secondarily can be explained in this way, when it occurs in or near the original seat of the disease. But it does not so easily explain the occurrence of cancer in parts *remote* from the original seat of the disease. In illustration of this point is the following case:—

I had a patient under observation who was suffering from primary melanotic cancer of the lymphatic glands in the axilla. The diseased glands were removed, and the patient had a good recovery, but afterwards suffered from secondary cancer of the scalp. In the latter situation the disease was identical with that of the lymphatic glands in the axilla.

Another case illustrating the same point occurred in a person from whom I removed, about eighteen months ago, a small epithelioma of the face. Dr. Parker had removed a similar growth from the same situation before. This gentleman made a good recovery, but he now is suffering from epithelioma of the rectum, and is rapidly declining in health. I have still another case, where it is yet more difficult to explain the secondary occurrence of the disease upon the theory that cancerous tumors are transplanted. That case was seen in St. Luke's Hospital, and was a small tumor which occurred in the left ventricle of the larynx. The tumor was removed, and the patient made a good recovery. The disease was never reproduced in the original locality. The nature of the tumor was determined by microscopical examination to be cancerous. About eighteen months subsequent to the operation, the patient again entered the same hospital, and died twenty-two months after the original operation. When post-mortem was made, cancerous disease was found in the suprarenal capsules of both sides and one ureter. It would seem hardly possible to explain this case upon the theory that secondary cancers are always the result of primary cancers; and all these cases which I have mentioned go very much to show that cancer is a constitutional and not a local disease. Some surgeons go so far as to say that all tumors are expressions of constitutional disease. It is a well-known fact that, in some cases, benign tumors are so numerous, that their occurrence in such numbers can only be explained upon the theory that they are dependent upon some constitutional cause.

With regard to hereditary tendency of cancer, Dr. Parker's statistics are very gratifying; but there are some facts which I think show that in some cases at least cancer can be inherited. Cases like the following would seem to indicate that the disease has a hereditary tendency. In that case autopsy demonstrated that the gentleman died from cancer of the stomach, and not long afterwards a son of the same gentleman died with cancer of the same organ. I have already in mind several cases equally as well marked which it seems to me clearly indicate that the disease has a hereditary tendency. With regard to the treatment of the disease, I have had no experience with reference to the use of caustics. I have, however, a very decided conviction that the knife is the remedy

so far as there is a remedy in this disease. I do not believe that cancer is purely a local disease, yet if the knife can be applied early, and remove not only all the tissue of the disease, but the tissues about the disease, there may be a chance for a long interval before a return of the disease, in some cases.

The reasons why I would advocate the treatment of cancer by operation with the knife are chiefly threefold. One is, that the nature of the tumor cannot be determined prior to its removal.

Another reason is, that it now and then happens that a tumor of undoubted malignancy is cured by this surgical operation. Finally, I think an operation is justifiable often upon the ground of expediency. The chances are increased, if the patients die from cancerous disease, that they will die not from the external progress of the cancer, but that they will die from cancer of some of the internal organs. It is very well known that the return of the disease is very often upon the internal organs after the external disease has been removed, especially upon the lungs, and a death from cancer of the internal organs is not so painful and not absolutely loathsome, as when permitted to pursue its ordinary course externally.

Dr. Buck related the history of a case of cancer cured in the person of a lady about 40 years of age. The tumor was in the breast, and possessed all the characteristics of schirrus. It was removed, and more than 30 years after the operation it was ascertained that the patient was yet living and in comfortable health.

Another creditable case was in a lady who was very timid and despondent. One determining point in this case was, to perform an operation in order to infuse hope into the mind of the patient with regard to her recovery. She did make a favorable recovery, and subsequently returned to France. That lady was well for two years, and I was fully convinced that she would not have survived as long as that without the operation. In these days of anæsthetics, we may more readily advise an operation, for the patients are entitled to the respite of hope and comparative comfort which may be more than an equivalent for the fears and sufferings which they may experience without the operation.

With regard to operating for the removal of cancerous breasts in very corpulent persons, my experience has been very discouraging. I always dislike to perform an operation upon such patients, for in some cases which I have seen their life is drained away, as it were, from the wound.

Dr. Thompson: Mr. President, upon perusing the records of the New York Pathological Society, from 1845 to the present time, I find that 55 cases of carcinoma of the stomach have been reported by various surgeons, of which Dr. Parker reported four. The first case was reported by the President of this Association, Dec. 24, 1845.

Of those 55 cases, 23 were males, and 18 females. In fourteen cases the age of the patient was not reported. The average age of the cases reported was 9¼ years, which is a little above the average age of Dr. Parker's cases, which he reports at 48⅞ years.

Remarks by the President.—Gentlemen and Associates: We may well congratulate ourselves upon the results of this evening's investigations and discussion. We have become better acquainted with the real nature of cancer of the breast, and with those hygienic, therapeutic, and operative means which will not only delay its progress and mitigate its dire effects, but which may in a certain number of cases remove it entirely.

The time has now arrived when its treatment is removed from all empiricism, and the regular profession is in possession of means which will accomplish vastly more for the sufferer than any boasted specifics, or any irregular or mysterious practice.

We now know that cancer of the breast is generally a simple and local, not a constitutional or hereditary affection. It is a mere excessive growth and proliferation of normal epithelium. The first change is a large accumulation of epithelium within the ducts of the gland, just as in ordinary adenoma. But soon the walls of the ducts are not only invaded by epithelium, but this is also found outside the ducts amongst the inter- and peri-glandular connective tissues, which in their turn are thrown into a state of active proliferation, and become infiltrated with small round cells. Now, we have every reason to believe, from the vast experience of Weeden Cooke, that the muriate tincture of iron and other mineral astringents will arrest these processes in their incipiency, and much delay them in their advanced stages.

We also know that the epithelial cancer-cells are not cemented together by any intercellular substance, and that the lymphatics communicate with the alveoli in which the loose and detached cells are contained. The mineral astringents will prevent the absorption of the infecting cells into the lymphatics and the further contamination of the system.

If the disease be farther advanced, we have every reason to believe that Marsden's and Cooke's pastes will accomplish more than any caustic vaunted by quacks.

Finally, with proper precautions, it has been proved that the knife may often be used very successfully. There is an active and passive stage of cancer; and when the tumor is removed in its active condition the constitution resents this premature interference, and the disease returns rapidly after the operation. The local soothing measures recommended by Weeden Cooke should be used until the tumor has ceased to grow, and then exsection may be performed with safety.

Correspondence.

CARD FROM DR. REESE, OF PHILADELPHIA.

To the Editor of the Medical Record.

Sir,—In a couple of foot-notes to an article by Dr. Chew, in your issue of July 15, pp. 335, 338, some errors occur, which, although to be expected, perhaps, *under the circumstances*, had better be corrected. The writer says, in reference to diagnosticating the case in question as one of strychnia-poisoning solely by the *symptoms*,—that "the opinion expressed above was controverted by Dr. J. J. Reese, who stated in his testimony that 'there is not a single poison that can be determined exclusively by the symptoms; if you could not distinguish by the symptoms, there would be only one other means of distinguishing: that would be a chemical analysis of the food.'"

The error here consists in not quoting my testimony correctly. It is unquestionably my opinion, and so I have always held and taught, that, in medico-legal cases, "there is no single poison that can be determined exclusively by the symptoms;" (then I added), "for if so, there would be no necessity for making a chemical analysis." Then I went on to testify, that in a case of suspected poisoning *which did not prove fatal*, the only certain method of proving the fact was—not only "by a chemical analysis of the food,"

but also, "of the excreta." I particularly emphasized the *urine* in cases of suspected *mineral* (tartar-emetic) poison. The clever *ruse* here consists in making me say that the only alternative in determining a poison, after a failure of the symptoms, was "a chemical analysis of the *food*;" whereas the real point of the case was that, *when the patient recovered*, this "analysis of the food," together with a chemical examination of the excreta, and especially of the urine, was the true alternative.

Now, this was precisely the condition of things in the case on trial. A sick gentleman was alleged to have been poisoned by several different articles—among them tartar-emetic. The State's "experts" relied *exclusively* upon the "symptoms," in order to sustain the theory of poisoning. *No analysis was made of the food or medicines administered; nor of the matters vomited or purged; nor of the urine.* Under such circumstances, I am free to say that the allegation of poisoning could not be *proved*.

Then comes in the second error. This writer endeavors to show, though not with the effrontery of his friend "the Attorney-General of Maryland," that in giving the above "opinion" on the witness-stand, *I was going back upon myself*, inasmuch as, in a certain case of strychnia-poisoning in which I was concerned, some years ago (the results of which were published in the *Am. Jour. of Med. Sci.*, Oct., 1861), I had testified that the chemical proof was not indispensable *in every case*, in order to prove the administration of poison, and for various reasons. In this instance, a careful analysis failed to discover the poison after death; and I stated, in the words of this writer,—"yet, all the moral circumstances connected with this case" (such as proof of purchase of strychnia, the conduct of the prisoner towards his wife—the victim—his subsequent actions; together with the violence of the seizure, the death, the post-mortem, etc.), "*as well as the symptoms*, clearly pointed to poisoning by strychnia." This is precisely my opinion still,—an opinion perfectly in accordance with what I have previously stated. While I have never said or believed that, *in every case*, the chemical detection of the poison was absolutely essential to establish the proof, I do hold that where this very important factor is absent—either through ignorance or negligence in a non-fatal case, or from some unavoidable contingency where the case has terminated fatally,—the other methods of proof should be made out so clearly and satisfactorily that there could be no possible mistake.

One other error, or rather *blunder*, of your correspondent occurs in the last foot-note. While laboring to account for Dr. Taylor's unfortunate difference of opinion from his own and that of his colleagues, he slyly suggests *an explanation* as to "how Dr. Taylor may have received a one-sided account of the testimony in the trial," viz.: "the fact that the new edition of his work on Medical Jurisprudence is edited, in America, by Dr. J. J. Reese"! Here the *blunder* consists in trying to reconcile the fact that "Dr. Taylor certainly received a report of the first trial of Mrs. Wharton,"—in which everything was made perfectly clear and distinct,—with the other ugly fact that, although arrived at mature age, and possessing some distinction as an author, he should presume to exercise his own judgment, and actually have the weakness to come to a conclusion different from that held by Dr. Chew and his colleagues! But there is still a loophole left for this simple-minded, immature Dr. Taylor: "a third supposition,"—that, "having read the trial, he had forgotten or overlooked the fact referred to;" and this, be it remembered, is affirmed of a distinguished author who deliberately prints the objectionable *opinion* in the "new edition" of his great work on "The Principles and Practice of Medical Jurisprudence,"—of which work Dr. Reese is *not* the American editor.

Your readers will observe that I confine myself exclusively to noticing the errors in the *foot-notes* of your correspondent's article. If I deemed it at all worth while to reply to those connected with myself personally, in his text, I would simply refer them to my original "Review of the Wharton Trial," as containing, as Paddy might say, *my reply in advance*.

Thanking you for your courtesy, I am,

Very respectfully yours,

JOHN J. REESE, M.D.

1840 GREEN STREET, PHILADELPHIA.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from August 5, 1873, to August 18, 1873.

SIMPSON, JNO., Surgeon.—Granted leave of absence for three months on Surgeon's Certificate of Disability. S. O. 163, A. G. O., August 9, 1873.

SIMONS, JAS., Surgeon.—Leave of absence extended thirty days. S. O. 45, Division of the South, August 5, 1873.

ALEXANDER, C. T., Surgeon.—Granted leave of absence for thirty days. S. O. 162, A. G. O., August 8, 1873.

WOLVERTON, W. D., Assistant-Surgeon.—Relieved from duty in Department of Dakota, to proceed to New York City, and report by letter, upon his arrival there, to the Surgeon-General. S. O. 158, A. G. O., August 2, 1873.

TILTON, H. R., Assistant-Surgeon.—Granted leave of absence for thirty days, to take effect September 1, 1873. S. O. 151, Department of the East, August 11, 1873.

SMART, CHAS., Assistant-Surgeon.—Assigned to duty at Fort Bridger, Wy. Ty. S. O. 129, Department of the Platte, August 5, 1873.

LAUDERDALE, J. V., Assistant-Surgeon.—Assigned to temporary duty at Fort Wadsworth, N. Y. H., during absence of Assistant-Surgeon Tilton. S. O. 151, c. s., Department of the East.

CLEARY, P. J. A., Assistant-Surgeon.—Relieved from duty in Department of Texas, to proceed to New York City, and report by letter, upon his arrival there, to the Surgeon-General. S. O. 160, A. G. O., August 6, 1873.

WIGGIN, A. W., Assistant-Surgeon.—Granted leave of absence for thirty days, with permission to leave limits of Department, and apply for an extension of thirty days. S. O. 95, Department of the Columbia, July 28, 1873.

DEATH OF DR. HENRY S. HEWIT.—It is our painful duty to announce the sudden death of our esteemed friend Dr. H. S. HEWIT, which occurred August 19th. We shall give a sketch of his life in our next.

BELLEVUE HOSPITAL MEDICAL COLLEGE.—Dr. W. A. Hammond has resigned his professorship. Dr. Janeway is to give the course on Materia Medica and Therapeutics, in addition to the course on Pathological Anatomy. The diseases of the nervous system will be treated of by the Professor of the Principles and Practice of Medicine.

Original Lectures.

A CLINICAL LECTURE UPON SORE NIPPLES AND MAMMARY ABSCESS.

By FORDYCE BARKER, M.D.,

CLINICAL PROFESSOR OF MIDWIFERY AND DISEASES OF WOMEN IN BELLEVUE HOSPITAL MEDICAL COLLEGE.

(*Phonographically reported for* THE MEDICAL RECORD.)

GENTLEMEN:—All of you may obtain a great reputation by performing some important surgical operation; but the unfortunate fact with regard to such reputations is, that they are not easily secured, because the opportunities only rarely present themselves for such operations; and, indeed, you may pass a lifetime in an active practice without once being called upon to perform an ordinary amputation of the thigh or arm.

Your reputation, however, may be very much jeopardized, if not ruined, if you are not able to treat successfully a case of sore nipples or mammary abscess, and these are the cases you will see perhaps every week in your life. In these cases the responsibility will always fall upon the doctor, and unless he is familiar with their management the weight may prove more than he can well bear.

In text-books in general there is a sad deficiency with regard to description of the different forms of these troubles, the proper management, and the exact and appropriate treatment for each definite form.

Various articles, with which every practitioner is more or less familiar, are recommended for their cure, without any definite rules being laid down, where one or another will be applicable. These remarks apply with equal force to both sore nipples and mammary abscess. The forms of sore nipples are these: First, inflammation. This generally occurs in those cases where the nipple is naturally contracted, or in those cases, which are not at all infrequent, where the nipple is almost completely absent.

The child when placed at the breast has great difficulty in getting hold of the nipple, especially when the breast is distended, which renders the nipple still more retracted; it pulls away at it, and as a result of the irritation to the breast an inflammation of the nipple takes place. This inflammation of the nipple may by propagation pass into the lacteal ducts, and we may have mammary abscess as a consequence of that.

Second, fissure or erosion of the nipple. These fissures of the nipple are of two forms. One comes from inflammation of the nipple, but there is another form which exists just at the base of the nipple, and gives the most intense pain and suffering, the patient, perhaps, bursting out into a profuse perspiration as the child is placed at the breast.

The next form of sore nipple is the ulceration which I have referred to in connection with the case now before you. The surface of the nipple is red, and denuded of its cuticle; the nipple is very much retracted, and in this case there is a fissure at the top. The pain is very intense, and it may be that the woman experiences as much suffering from this as from anything else during the entire puerperal period. The process does not generally confine itself to the nipple alone, but the areolar tissue around the nipple becomes inflamed, and as the inflammation becomes more intense, perhaps one-half or two-thirds of the nipple becomes entirely destroyed in the process. These three forms are distinctly and easily recognized; and now a few words with regard to the treatment of these different forms.

In the first place, for drawing the nipple out. There is a great difference among authors as regards the propriety of applying the child to the breast immediately after the confinement has been completed, and also as to the proper time when it should be done. Some writers recommend that it should be done as soon as possible after delivery. The reason given for this early application of the child to the breast is, that the child by nursing stimulates the breasts, which excites reflex action in the uterus, thereby producing uterine contraction, which renders the woman less liable to post-partum hemorrhage.

With reference to that point, I can say I do not consider it to be sound practice. I adopted it for some years, but have given it up entirely. You can procure uterine contraction, which will place the woman out of all danger from post-partum hemorrhage, by means which are far less exhausting for the patient than the resort to the troublesome efforts of the child at nursing. I now advise to get the woman completely restored after the fatigue of confinement before applying the child to the nipple.

The first stage after parturition is that of exhaustion. The whole effort of the system has been used to accomplish this result, and so complete is the exhaustion, that it is very commonly manifested by nervous chills. If the woman is permitted to get a few hours of sleep, her exhausted nerve-power will be restored, and *then* is the time to direct that the child should be placed to the breast.

The main reason for this is, the breast is not now distended, and the nipple is easier drawn out. The traction excites the more rapid secretion from the breast, and the first secretions from the breast are of great benefit to the child as a laxative, being its first proper food. It is then that the nipple can be more readily grasped by the child, and properly formed. If, however, you wait until the secretion of milk has taken place, and the breast has become distended, before applying the child, the distension itself causes obstruction to a free flow through the ducts, and the nipple and breast may become a very great source of irritation.

There are some cases in which the nipple congenitally is so short that the child cannot get hold, and it must be drawn out by some mechanical appliance. The most common method resorted to for accomplishing this is the old-fashioned application of a bottle, which has been filled with hot water and emptied, and the use of the breast-pump.

A few words with regard to breast-pumps. Most of them are constructed upon principles utterly devoid of common sense. Most of them have so small an opening in the part applied to the breast that the nipple is constricted, and the milk cannot flow at all after the first two or three exhaustions of the instrument.

The essential requisite for an efficient breast-pump is a large bell-shaped extremity, so that the nipple is not at all constricted by the narrow diameter which is applied over it.

The pump which meets the indications most satisfactorily, and which has come to my notice, is what is called Mattson's breast-pump, and it is a most excellent instrument.

With regard to treatment of the sore nipples, the following are the rules which chiefly govern me in the management of these cases: If the nipple is inflamed, apply a poultice until the inflammation is subdued, and then apply a solution of nitrate of lead in glycerine, ten grains to the ounce. This is also the most com-

plete and perfect prophylactic against the occurrence of sore nipple that I know of. This solution should be applied immediately after nursing, having first washed the nipple perfectly clean.

The application must also be washed off every time before the child nurses. It is almost a specific, when properly used, against excoriations and ulcerations. If the tendency is quite strong to sore nipples, the solution may be used of the strength of 15 grs. to the ounce, or even ʒi; but as a rule the 10 gr. solution is sufficient. Next, where the cuticle is denuded, and we have a raw surface, or it becomes so irritated that there is a tendency to an abrasion, the indication is to form an artificial cuticle, which will entirely protect the parts, and yet permit the milk to pass through it.

For this purpose collodion has been extensively used. The objection to the collodion is this, that it contracts as it dries, and thus itself becomes a source of superficial irritation and discomfort, and does not readily permit the flow of the milk. I have used for this purpose, and with the most satisfactory results, the Compound Tinc. of Benzoin. Wipe the nipple dry after the child has nursed, and with a camel's-hair brush apply four or five coats of this tincture.

The first application may produce some burning, but when once applied this will be entirely overlooked, and the woman will desire its reapplication. This forms a most excellent artificial cuticle, and at the same time permits the flow of milk without obstruction. Cicatrization will take place under this coating, and the patient will thank you for the benefit received. When the fissure is at the base of the nipple, very small it may be, but accompanied by the most severe and agonizing pain, the most satisfactory method of management is to touch the fissure with a fine point of nitrate of silver, and apply over this the Comp. Tinct. of Benzoin as before.

When the inflammation and ulceration have gone on to such an extent as to destroy the surface of the nipple, and there is danger of the inflammation extending back to the mammary gland, do not allow your patient to torture herself by allowing the child to nurse. Remove the child entirely, and empty the breasts by the breast-pump or by rubbing.

I then use as an application in these cases the following:

R. Rose Ointment	ʒi.
Carb. Magnesia	ʒi.
Calomel, grs	xxx.
M.	

These ingredients should be rubbed together very carefully, and it should be freshly prepared, perhaps every twenty-four or thirty-six hours. If the child is permitted to nurse at all, it should be done entirely through an artificial shield, and the best shield is one made of the cow's teat. The objection to the india-rubber shield is, that there is an offensive odor emitted from them, and they are very apt to make the child's mouth sore.

If, however, it becomes necessary to use the shields which are in the market, in selecting them get a broad base, what is called the L-shaped glass, in the same manner as in the selection of the breast-pump. The ordinary nipple-shields seen in the stores are simply abominable.

The next subject which is immediately connected with the one just under consideration, is a very troublesome complaint, viz.: mammary abscess. This woman who is now before you has been confined about one month, yet it is only three days ago that she began to complain of her breast, and since that time suppuration has taken place.

This is an important point, and one which is often overlooked in the books. It will be seen that the whole surface of the gland about the nipple is inflamed, the woman had a chill, has a fever, &c., &c. This is probably one of those cases which is the effect of the peculiar poison which develops puerperal fever in some cases, puerperal peritonitis in others, and mammary abscess in others. There are three different forms of mammary abscess. First, inflammation of the cellular tissue surrounding the nipple and external to the breast; second, inflammation of the substance of the gland itself; third, inflammation of the areolar tissue between the gland and the thorax. The first form may result from irritation, and is nothing more than a pure simple phlegmon, requiring the same treatment. It usually terminates rapidly, is not attended with the constitutional shock which accompanies glandular inflammation, and is to be treated the same as phlegmonous inflammation elsewhere. As soon as fluctuation is detected, the question may arise whether the escape of the pus should be permitted to take place spontaneously, or whether the breast should be opened by the surgeon. The amount of constitutional disturbance is to decide that, and if it is decided to open it, the incision should not be made within the areola, because the retraction which is incident to cicatrization will spoil the nipple for future use. The sooner this discharge takes place, the sooner the healing process will be completed, and the breast restored to a healthy condition.

In case the gland itself becomes inflamed, it is attended with more constitutional disturbance. There is headache, chills, fever, full pulse, high temperature, etc., and yet even greater constitutional disturbance if there is a tendency to the formation of multiple abscesses. If these cases are seen at a very early period of their formation, when there is great tenderness, high temperature, fever, etc., pulse 108, perhaps 120, it may be well to try to abort the inflammation. For this purpose I give the woman ten grains of Dovers powder, with an alkali, paint over the surface of the gland with Tr. Iodine, and cover it with a warm poultice or cotton padding covered with oil-silk. Empty the breast with a pump, and in most cases you will arrest the whole thing at once.

The trouble is, that the patient does not see the physician until this period has passed, and then suppuration must be favored by poultices. Internally the patient must be ordered as full doses of quinine as she will tolerate.

As soon as fluctuation is detected, open the breast at the lowest point, because otherwise pus will burrow between the tissues of the gland, become a source of irritation, and produce another inflammation.

The third form is called the sub-glandular, and is attended with still greater constitutional disturbance. It has none of the external redness present in the other forms, because it is situated between the gland and the thorax.

The gland sometimes becomes very prominent. The inflammation is attended with intense, severe pain, rigors, chills, and yet upon the external surface there may be no special intimation of its existence. The most significant symptoms are that the patient complains of difficulty of breathing on account of pain produced, and, when present, the prominence of the gland. These cases are generally exceedingly tedious, and sometimes dangerous, because the inflammation is so deep-seated that the pus between the gland and the thorax burrows about, forming sinuses and extensive fistulous tracts, which may be exceedingly troublesome and exhausting from the profuse discharge and constitutional irritation which is produced.

My hour has already passed beyond its limits, and further remarks upon this subject must be postponed until some future date.

Original Communications.

ILLUSTRATIONS OF POTT'S DISEASE OF THE SPINE IN THE CERVICAL REGION,

AND OF ITS SUCCESSFUL TREATMENT BY DR. CHARLES FAYETTE TAYLOR'S METHOD.

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THE Case-book of the Orthopædic Dispensary shows that, from April 1, 1869, to Feb. 1, 1873, there were admitted to the dispensary 280 cases of Pott's disease; and further, that 62 of these—over twenty-two per cent.—had the disease in the cervical region. It will thus be seen that the cervical vertebræ are as liable to injury and disease as any division of the spinal column. It is also true in our experience that disease in this location, when left without interference, runs a more rapid course and more frequently has a fatal termination than is the case when the lower divisions are attacked—a statement which is well supported by the fact that we seldom meet on the streets with examples of the characteristic deformity which is produced by disease in the cervical region, although we have shown that this division is as frequently attacked as any other.

Our experience does not lead us to consider one portion of the spinal column more likely to be exempt from disease than another, but the prognosis is much modified by the location of the affected part. Disease of the cervical vertebræ, when left to unrestricted progress, is considered most likely to terminate fatally. Disease in the lumbar and lower dorsal region is also considered more unfavorable, when left to itself, than disease in the middle dorsal region. The latter is rarely fatal, and even when allowed to progress without interference will generally terminate favorably for the patient's life. There will be deformity, of course; but the shortening of the stature is partly compensated for, so far as the lungs are concerned, by lateral and antero-posterior expansion of the thorax.

The reason why disease in the middle dorsal region progresses more slowly, and generally terminates in recovery, is undoubtedly owing to the fact that the ribs and their attachments act as constant supports, preventing, to a certain and important extent, the weight of the body above from pressing with its full force on the diseased parts. The pressure from above gradually expands the chest, and the upper portion of the spinal column is thus let slowly down without the same amount of injury to the diseased section or the shock to the whole system as would exist were the disease in the lumbar or cervical regions, which have no such natural protection. But, on the other hand, when mechanical interference is attempted, we find that the cervical and lumbar regions are much more amenable to treatment than the dorsal. The very conditions—such as the absence of support furnished by the ribs to the dorsal vertebræ, which make the progress of disease in the cervical and lumbar vertebræ more rapid and dangerous—render it also much more amenable to successful mechanical interference. The dorsal vertebræ are always subject to the constant motion of respiration, while their costal attachments, which afford a natural protection to the diseased bodies, are equally instrumental in preventing the establishment of complete relief from pressure and motion by artificial means. Leaving the consideration of disease of the lumbar vertebræ, which has many interesting peculiarities, to a future time, the object of the present writing is to call attention to the successful treatment of disease of the cervical vertebræ. I am led to believe, by many inquiries and remarks, that physicians in general have no recognition of the frequency of Pott's disease in the cervical region.* I have already shown how frequently it is to be met with, and I hope to show that in this locality the disease is even more amenable to treatment than it is in any other, and more uniform success is obtainable. By "uniform success" I do not mean the removal of an anchylosed kyphosis; for anchylosis, when the disease has gone so far as to destroy the bodies of the vertebræ, is but another word for cure, and no one would propose to interfere with the conservative results of this natural process. But need a case proceed so far as to render the best result of treatment to be an arrest of the disease and anchylosis, with no further deformity than that occasioned before the treatment was commenced? This question will be answered when we consider the early diagnosis of the disease. Give the inflamed part rest (not seeming or partial, but complete and long continued), and if the constitution be not too depraved, either in consequence of hereditary tendency or because the disease has been neglected too long, the inflammation will subside and the patient get well. The patient will not recover merely because he has an instrument on his back; but he will recover, all other things being equal, if in the first stage the treatment is successful in giving absolute rest to the injured parts, and this rest is maintained for a sufficient length of time. Here it may be remarked that we must not be content with simply applying an instrument. We must constantly watch him and "treat" the disease by means of the instrument. This constant attention to the mechanical treatment is absolutely necessary to secure the object of the apparatus.

Cases have recovered in the recumbent position; but I think it will be found on investigation that these were very recent and very favorable cases in which a strong tendency to recovery was united to more than ordinary ability to bear confinement. So, too, there are many cures by many instruments when in judicious, *patient* hands. The only virtue claimed for Dr. Taylor's method is that it seeks—first by a very perfect mechanical appliance contrived for the purpose of carrying out a well-defined principle of treatment, and secondly by patient, persevering watching and

* Rokitansky says: "The most common situation of the disease is the lower dorsal and upper lumbar regions, though it does occur also in the cervical and the lowest part of the spine." Philadelphia, 1855, vol. iii., p. 181. Prof. S. D. Gross (p. 147, Gross's Surgery—same): "It is met more common in the dorsal region than in either the cervical or lumbar, the second, third, and fourth pieces being especially prone to suffer. It is generally stated that the lumbar vertebræ are more frequently affected than the cervical, but this I believe to be an error." Dr. Henry G. Davis also says that "the disease is much more common in the dorsal region than in either the cervical or lumbar." Several other authorities consulted say nothing in regard to the relative frequency of the disease in different regions. It should be remembered that Rokitansky's opinion is derived from examination of cases *dying in hospital*, and is therefore, in reference to this question, less trustworthy than statistics derived from observing living cases. Our private cases, which are very carefully recorded, show even less difference in location of vertebral disease than do those of the Orthopædic Dispensary. I think the number here reported sufficient to establish that there is very little selection of vertebræ which are more likely to be affected by disease.

adjustment of it—to actually insure the needed rest for the injured vertebræ; and that in carrying out this method the confinement to the recumbent position, except for a short time in acute cases, is unnecessary. Where the recumbent position, without the spinal assistant of Dr. Taylor, is unable to afford relief to the diseased vertebræ, we are able to give the required support with entire success. To those cases which are either incurable from the start—such as occur in highly strumous constitutions—as well as those which have passed beyond the curable stage, we are able to offer a sure amelioration of suffering, a probable arrest of the destructive process, and, to many, a positive diminution of deformity. The treatment, then, consists of simply answering the prime indication presented in all inflammations, no matter where situated—in giving the inflamed part rest.

How important it is, then, that an early diagnosis be made, and the treatment begun before the morbid process has advanced to the production of irreparable mischief. The early symptoms of Pott's disease of the spine, which Dr. Taylor was the first to point out in complete form to the profession nearly ten years ago,* have proved of the greatest importance in determining the existence of that disease long before it could have been detected by any physical signs. Pain nearly always characterizes the early stages of cervical disease. It may be located in the abdomen, but more frequently extends up the back of the neck to the base of the skull. A steady pain, often severe in character, in the neck, extending to the shoulder and down the arm, is quite common. A disposition to stammer is sometimes noticed. This and paroxysms of an asthmatic character existed very marked in one case of cervical disease where there could be no mistake in the diagnosis; for there was a sharp projection of the fourth and fifth cervical spinous processes, and the "asthma" and stammering disappeared after a short period of treatment. The origin and course of the spinal accessory nerve, and its connection with the pneumogastric, suggest the cause of these symptoms. They had existed for nearly a year before the projection was noticed, but their cause was not suspected. Hiccoughs, followed by pain, are sometimes noticed as a prominent symptom, though it is more often met with when the disease is at the dorsal vertebræ. When the disease is at the seventh cervical or first dorsal vertebræ, the respiration may be somewhat short and jerky, owing to an instinctive dread of a too full and rapid expansion of the chest, which might produce a motion at the vertebræ, and pain. The same instinctive dread of motion causes the patient to hold the head fixed at one position; and should this position happen to be with the head rotated and flexed, it should not be mistaken for ordinary torticollis. Too much stress must not be laid on the inability to find the exact point of disease, or a commencing projection in the neck, which of course would not be apparent until a certain amount of tissue had been destroyed by the disease. The natural lordosis in the neck and the prominence of the muscles, together with the short and nearly vertical cervical processes, make it difficult to reach or to see the spinous processes of the affected vertebræ, except in the lower portion, where the normal but variable prominence of the seventh spinous process enters as an uncertain factor. But a little study of the movements and attitude of the patient, which are among the most valuable indications of the presence of disease, together with the physical signs which have already been enumerated, are, in most instances, sufficient for a clear diagnosis long before the vertebral articulation is destroyed. Let no one fail to carefully watch the patient's attitude and movements when disease of the cervical vertebræ is suspected. The carrying of the head thrown backward; the sideways posture often mistaken for lateral curvature; the supporting of the head by the hands and the leaning heavily against whatever gives support, or a simple tendency to any or all of these, are among the more prominent physical signs of commencing cervical disease. In one child, three years old, thickset and well covered with adipose, the lowering of one shoulder was the only observable malposition. Several careful examinations, made by watching the child while she moved about the room naked, revealed that the real seat of distortion was a tilting of the neck to one side, and that the compensating lateral deviation of the spine, made in order to retain the head in a vertical position, caused the shoulder to droop. It was impossible to obtain the child's co-operation in making a diagnosis, and hence the above procedure. Efficient antero-posterior support furnished to the cervical vertebræ removed the drooping of the shoulder in a few months. The child remained under our observation for six or eight months after the spinal assistant was removed, and was perfectly well during that time.

There can be no deviation from the natural position in one part of the column without the production of corresponding changes in other portions. The slightest dropping forward of the head, from a loss of substance in the bodies of the cervical vertebræ or the intervertebral bodies, is instantly followed by a depression of the spinal curve between the shoulders and a flattening of the back at this point. This is caused by a straightening of the dorsal curve of the spine, and is a sure indication of loss of substance in the bodies or intervertebral cartilages of the upper cervical vertebræ. This change is seldom symmetrical, and there is generally some slight lateral deviation of the dorsal spine, which, I repeat, must not be confounded with lateral curvature of the spine.

It is no uncommon event for two points of disease, separated more or less widely, to develop in the spinal column. Both may be developed at the same time; or, what is more commonly the case, there may be an interval in the setting up of the morbid processes at the different points; and, generally, the cause of the second is of a similar nature to that of the first, when it cannot be traced to the same cause. In cervical disease it is so common for another point of disease to follow lower down, that we are now on the lookout for it. This second development is always in the same place, about the last dorsal and first lumbar vertebra, and occurs in perhaps forty or fifty per cent. of all cases of cervical disease—a serious complication if timely precautions are not taken. There is no doubt in my mind but that it is due to the peculiar attitude the patient is forced to assume when the cervical vertebræ are the seat of disease. This attitude is shown at Fig. 1. The vertebral or intervertebral bodies are kept constantly impinging on each other, and the constant pressure produces their partial absorption, and ultimately becomes equivalent to a traumatic cause of their disease. The head may be thrown back or it may drop forward, but in either case the trunk inclines forward in such a manner as to make a bend in a posterior direction, at a certain point below the disease, at which point there is a great increase of pressure. This is especially the case when no appropriate antero-posterior support is provided, and the tendency of the lumbar part of the spine to bulge backwards is not always fully prevented even by a well-arranged instrument; although it may prevent

* See *Transactions N. Y. State Medical Society*, for Feb., 1863.

this second point from becoming affected with actual disease. But as the disease at the cervical region subsides, the spinal muscles regain their strength sufficiently to give the spinal column its natural contour. Feeble children in arms, before one year old, often have this disease produced in the lower dorsal region, in consequence of being habitually kept in the sitting position. The muscles of the back are not sufficient to sustain the child, and hence the whole force of the upper portion of the trunk impinges on two or three vertebræ in the centre of the spinal column. We have many cases of Pott's disease in infants, and the disease is always in the same place, and often we are able to trace its causation to the fact that the patient has been kept in the sitting position very constantly without proper support by the hands.

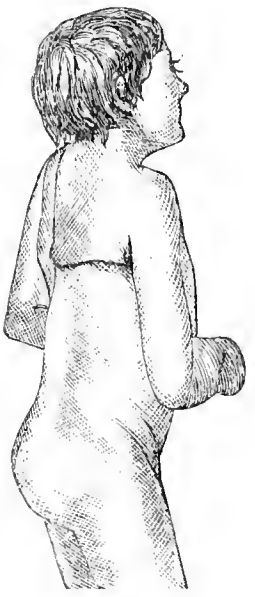

Fig. 1.

In a later stage of disease of the cervical vertebræ paralysis is a frequent complication—relatively more frequent than when the disease is situated in the dorsal or lumbar region. Perhaps the more rapid progress which cervical disease is apt to make, and its more frequent fatal termination, may be due to the fact that the arrangement for the many motions of the head affords less natural protection in case of injury than is the case with the dorsal and even with the lumbar vertebræ. At any rate, we know that disease in cervical vertebræ, when the vertebræ are not protected, is peculiarly liable to the formation of abscess, and paralysis ensues as a consequence. The holding of the hand to the chin, which the patient is apt to practise, is a poor substitute for adequate support, though an important diagnostic sign. The shortening of the neck and the resting of the occiput between the shoulders is frequently seen in children, and are important symptoms, especially in very young children, when there is so much adipose as to increase the difficulties of physical examination.

I now pass to the consideration of the means of treatment and the results as exemplified in practice.

The apparatus used for protecting the vertebræ, when they are diseased in the cervical region, is figured in the accompanying engraving (Fig. 2). It consists of a hip-band (D), two uprights, having each near the top a diverging strip fitting and resting on the trapezius muscle close to the neck, and from the end

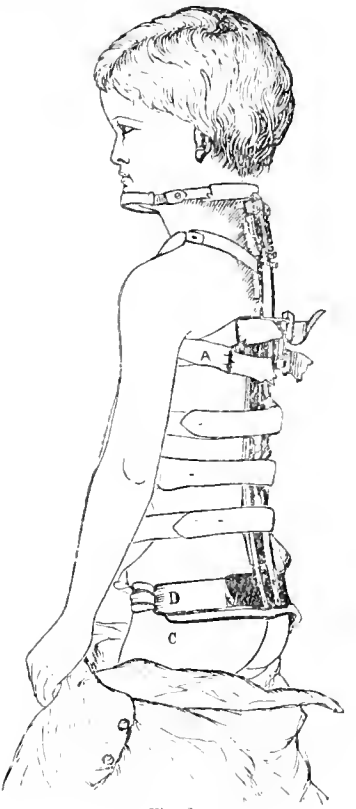

Fig. 2.

are straps (A A) which pass under the arm and are buckled to the uprights, as shown. The instrument is held firmly against the patient's body by the "apron," which is seen with straps fastening around the whole trunk. The upper strap of the apron is fastened to a horizontal bar of steel extending across the patient's back, this not confining the respiratory movements of the chest to such a degree as might be the case if it passed wholly around the body. At the top of the upright is fastened the 'pivot" which holds the "head-piece," and on which the latter rests. This "head-piece" is of steel, opens with a joint, and is fastened together with a clasp (Fig. 3). The chin

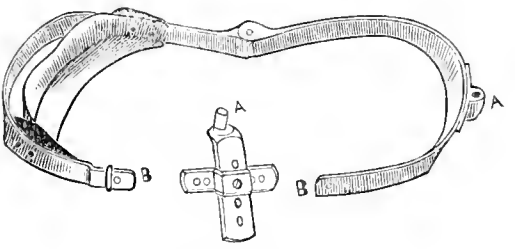

Fig. 3.

rests on a floor of padded leather covered with velvet, but neither the occiput nor the back of the neck necessarily touches the instrument.

The mechanical action is entirely antero-posterior. There is no vertical support. In this respect Dr. Taylor's instrument is a radical innovation on all previous

efforts to support the spinal column by mechanical means.* The antero-posterior action of the instrument—imitating to a certain extent (and to that extent being supplementary to) the spinal column—is accomplished by hinges and adjusting screws, which are shown in Fig. 4. The steel is rendered soft by

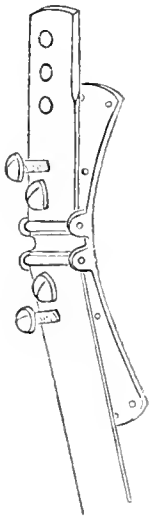

Fig. 4.

annealing, and must be bent by the surgeon's own hands to suit the indications for support. This stage of adjustment is beyond the possible comprehension of the mechanic who may have fashioned the instrument up to this point. For all ordinary cases the instrument as here figured is sufficient. But when there has been extensive destruction of the bodies of the vertebræ, and there are many signs which may lead us to infer the existence of an abscess, there is need of lateral supports to the head in addition to the ordinary antero-posterior one—in such cases small vertical pieces (shown in Fig. 5) are riveted to the "head-piece," and pass up behind and to a point just above the ears, having a band passing around the forehead, and completing an instrument by which the head is firmly held in all directions. This strap about the forehead may be useful also in occasional cases of excessive deformity, in relieving the chin of a part of the pressure against it; for the farther the spinal column has fallen from its natural position the greater must be the force to support it. When support and absolute rest are given to the diseased vertebræ, before caries or interstitial absorption (we omit here tuberculosis) has caused much loss of osseous or intervertebral tissue, we may be confident of saving the affected articulation intact, and of leaving the spinal column flexible, without anchylosis at any point. But when active destruction of the bodies of the vertebræ has commenced—which we can tell by any change in the natural form of that part of the column, even before a sharp projection of a spinous process is perceptible—our labors are increased and the period of reparation prolonged. But we may still expect complete restoration of form and function in a certain number of cases. At a later period, viz., after a sharp angle denotes positively an extensive destruction of vertebral substance, we have not only to wait for the reparative process to obtain in place of the morbid one, but we must continue to protect the affected part till the reparative process is completed in anchylosis. The greatest care should be taken and sufficient time given for obtaining a sound anchylosis, that it may be able to resist the unusual amount of weight and concussion which the position of this point in the middle of a crooked section causes to be transmitted there. A force which in a natural spinal column would be distributed equally throughout the whole or the greater part of the spinal column, in case of distortion is centred, more or less, at the point of greatest deviation, which is also the point of disease.

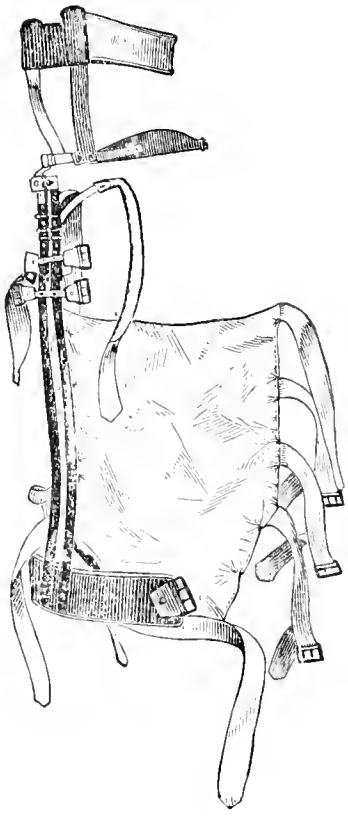

Fig. 5.

In the earlier stages, that is, before destruction of the vertebræ has followed the inflammatory stages, a few months' careful treatment generally suffices to effect a cure, with complete restoration of function. But in the later stages we can never expect the diseased and partially destroyed vertebræ to bear without assistance the pressure of the weight above in less time than from three to five years of careful treatment.

It is a great success which effects a restoration without increase of deformity in that length of time. Our average result in the treatment of disease of the cervical vertebræ is the arrest of further destruction of the vertebræ from the time the treatment commences. In regard to the form of the patient, we can speak more favorably of the disease at the cervical vertebræ than at any other portion of the spinal column; for here, in most cases, we often obtain at any stage a certain amount of diminution of the deformity.

The following cases are a few among many, and are

* See "Mechanical Treatment of Angular Curvature, or Pott's Disease of the Spine," *Transactions of State Medical Society*, 1873.

selected with the view to illustrate a variety of points in regard to their diagnosis as well as treatment.

Case I.—From our private Case-book. R. F., Nov. 8, 1866. This was a little boy from Chicago, three and a half years old, who about one year previously had fallen on the sidewalk. He soon began to complain and carry his head awkwardly; had a disposition to stammer, also paroxysms of difficult respiration, and a dry, short cough. He spent the next

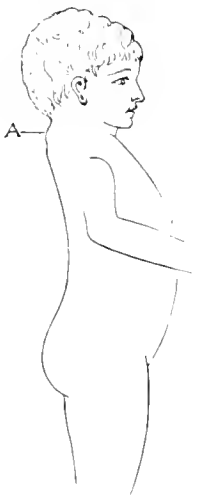

Fig. 6.

winter in New Orleans, and then coming to New York he was treated by an eminent medical gentleman for *asthma*. When examined he was in a most miserable condition. Respiration labored and somewhat prolonged; head thrown back, and there was so much suffering on being moved that he would lie for long periods in one position, generally in his nurse's arms, with his own hands to his chin. There were also pains in the chest and abdomen, and he was much of the time suffused with perspiration. Instrument applied Nov. 8, 1866, and in about a week, by frequent modifications, he began to be well supported. He was at first so doubled, and his muscles were so rigid, that the instrument could not be fitted at once. In a fortnight the "asthma" had left him—it was the characteristic labored respiration of spinal disease, to which allusion has already been made—and he began to walk about. The case has been carefully watched, and has progressed so favorably that he is now apparently as well as any boy of his age. Fig. 6 represents the slight deformity which existed at the time he commenced treatment, and there has been no increase since.

Case II.—From Dispensary Case-book. Carrie P., of Port Jarvis, N. J., aged two and a quarter years, was first seen on the 19th of January, 1869, when she presented a very miserable appearance—a pale, puny, ill-nourished child, with head thrown back and neck almost obliterated, and all the usual symptoms of cervical disease. Her previous history could not be clearly ascertained; but her father had died of Pott's disease. The mother was a poor sewing-woman, and it was some weeks before the child was returned for treatment and the instrument applied; for the Dispensary refuses to receive cases unless some assurance is given by a responsible person that the after-treatment of the patients will be followed out. Her progress, considering all the circumstances of the case, was truly remarkable and rapid. She was obliged to wear the instrument only about fifteen months, since which time she has been entirely well. The deformity, which appeared in a slight projection on the upper cervical region, entirely disappeared, and now presents—what is very common in such cases after successful treatment—a flattened and straightened appearance, instead of the usual slight angle caused by the prominence of the seventh spinous process.

Case III.—From private Case-book. Parmly B., five years and two months old, Woodstock, Vt. Location of disease, sixth and seventh cervical. A healthy and robust child, though weaned at two months of age, at which time he was brought from California, via Panama, to New York. Walked at one year of age; at twenty months he fell from a baby-carriage, and was also sick about the same time with something like diphtheria. After this he began to be weakly, commenced to complain of his neck, particularly when dressed or handled, and to hold his head on one side. At other times he was cheerful and apparently well—variations of condition which usually happen in these cases. He was treated for rheumatism without benefit. Brought to Dr. Taylor, at two and a half years of age, for "wry neck," and received treatment for that affection, as the true nature of the disease was not then discovered. He was only seen two or three times, and then lost sight of until April 13, 1868. He still continued in poor health; did not like to sit up like other children, and when tired would hold up his head by his hands; he still complained of his neck.

April 13, 1868.—Undue prominence of sixth and seventh cervical is evident, but his mother attributed the projection to his being so thin. Disease of the spine is diagnosed from the rational symptoms, as well as from the form, and the spinal assistant applied. He improved at once.

Sept. 22, 1870.—Patient reports in excellent health. Wears spinal assistant occasionally, when exposed to any great fatigue, as a "wise precaution."

February 22, 1873.—Patient has now been entirely without his brace for over two years; is in robust health, riding on horseback, and entering into all the sports of an active boy of his age.

Case IV.—Gertrude B., Northumberland, N.H., eight years old. Disease of the sixth cervical vertebra. Consumption on both sides. History, Oct. 24, 1868:

In Dec., 1867, had scarlet fever badly, which was followed by slow convalescence. In April she began school, apparently well, but in about three weeks she was attacked with a severe illness, the character of which cannot be definitely ascertained, but which was accompanied by fever, cough, restlessness, and pain in the neck and abdomen. She could not be taken up nor handled without the production of intense pain in the neck and back, and "stomach-ache." Towards the last of June she recovered sufficiently to walk alone. Besides the projection of the spinous process of affected vertebræ, the neck is partly flexed and rotated to the right, and all the symptoms point to the existence of Pott's disease. The child is fairly nourished, but has valvular disease of the heart. Oct. 27, 1868, the spinal assistant is applied. In the spring of 1869 she was doing well. She could then rotate the head perfectly. In April, 1870, the patient reported after a year's absence. Rotation of the head was perfect, and health good. A new instrument was applied, as a precaution against sudden shocks or accidental strains; but patient was considered well. She removed this instrument entirely in the course of a

few months, and a year later her father reported her in excellent health.

But it is not always the curable cases which best illustrate the value of a treatment. To prolong a life which seems in jeopardy, to ameliorate severe suffering when you cannot cure, is often a severer test of a method of treatment than the recovery of less severe cases. The two following cases are introduced to show what may often be done in the seemingly most unpromising cases.

Case V.—Mr. C. A. Mallory, forty years old, and married, a native of Connecticut, but for many years resident in Iowa; had been in the army, but by occupation a farmer. He remembers to have received a severe shock while on a reaping-machine, in Aug. 1868, which was followed by "rheumatism" of neck and shoulders. He grew better, and came East on business, and on his return, while standing on the steps of an omnibus in Chicago, with a heavy carpet-bag in his left hand, the horses started, and he was thrown off with such force that, striking on his feet, his left shoulder was dislocated. The dislocation was reduced, with much subsequent pain to patient, and he proceeded on his way; but from that time his neck began to stiffen and he endured much pain in the neck and base of cranium. He was treated again for "rheumatism," and after about six months came East to his friends in Norwalk, Ct. He had gradually grown worse, and at this time he was paralyzed in his upper and lower extremities, and could swallow with difficulty. Soon there was rupture of an abscess situated in the posterior wall of the pharynx, which discharged (January, 1870) through the mouth a large quantity of pus. After this the paralysis was somewhat better, but still existed partially over his whole body below the seat of disease. When Dr. Taylor saw him, in March, 1870, he was lying in a reclining-chair, with his head so strongly flexed and rotated to the right that his chin rested on his chest to the right of the sternum. He could only be fed with a spoon. It was possible, however, by having his head held firmly, to take a few steps when necessity required it, but it was attended with the utmost suffering, and all movement was avoided as far as possible. In addition to undeniable signs of disease at the upper cervical region, there was also a secondary development of the disease at the last dorsal and first lumbar vertebræ. In fact, he had been given up to die by all surgeons who had seen him. Believing there was still a chance for him, he was brought to New York, and an instrument applied March 17, 1870. Improvement began at once, and he was able to go home at the expiration of ten days. After four weeks he returned, being able to walk from the steamboat to the street-cars without difficulty. The aspect of his countenance, which had been extremely haggard, was much improved, and he had begun to feed himself. He continued to visit us with regularity, showing steady improvement in strength, with restoration of the position of his head and diminution of pain, till Aug. 18, when he was obliged to return to Iowa. At that time the face was still a little rotated to the right, but there was some motion, and he could "front face," although with an effort. But he walked and rode about with entire independence, though his paralytic symptoms were not entirely removed. Writes Jan. 26, 1871, that his head is in the natural position, and he can move it forward and backward, and can also rotate it a little. Is able to go without the instrument for a time, and proposes to leave it off entirely in the spring, which is probably a mistaken policy.

Case VI.—Mrs. E. D. Tucker, fifty-four years old, New Haven, Conn. No hereditary disease. Duration of the disease about eight months; cause, traumatic; location, fourth and fifth cervical vertebræ; pain in back of neck and under occiput. History, May 26, 1871: She fell down-stairs last November, and struck the back of her neck, which has been painful and stiff ever since, and is steadily growing more so. She cannot turn her head to either side more than twenty degrees, and says she feels a grating sensation under the occiput when rotation is attempted. When she walks she is obliged to support her head by putting her hand to her forehead, and says that her head feels too heavy for her body. There is slight swelling along the back and side of the neck, which is sensitive. Spinal assistant was applied June 1st. Patient was relieved of pain *at once*, and continued improving steadily. Sept. 23d, 1871. There is no grating sensation on moving her head, and a steady pain, which used to be at the right mastoid process, and "would soon have worn her life out," has disappeared. It returns only when the brace has been off a while. The motion of the head is free, and the patient holds it in a natural position without any effort. She reported to us in January, 1873, in excellent health and with no trace of the disease.

Mortimer Taggert, 15 years of age, applied at the Dispensary for treatment, June 15th, 1871. His gait and attitude were peculiar, and would readily attract attention—(see Fig. 7)—head bent forwards, and chin resting on the sternum. Any attempt to raise the chin, or any jar, occasioned pain referred to the forehead, and to a point over the spinous processes of the fourth and fifth cervical vertebræ, also to each side of that location. There was a slight lateral inclination of the spinal column, which has already been alluded to as one of the physical signs to be regarded in making a diagnosis of cervical disease, and which is easily explained as a compensating curve caused by the effort of the patient to hold his head in a vertical position.

Fig. 7.

In November, 1870, patient's neck became stiff and painful, a few days subsequent to a blow on the neck from the fist of a playmate. About a month afterwards was obliged to go to bed on account of the severity of the pain. He could not be moved or even touched for four months. The pain during this time was "all over," to use the patient's own words, "and a good deal in the stomach." He was treated by blis-

ters and other applications to the neck, without any relief from his suffering. After four months' quiet he began to feel less pain, and for two months previous to his application at the Dispensary had been able to go about. He was beginning, however, to feel that his condition was steadily growing worse, and dreaded a return of the attack of the previous winter.

The spinal assistant, with the chin-piece, was applied on 23d June, 1871, with immediate relief to the patient. The treatment was kept up faithfully, the instrument being worn as usual unremittingly, night as well as day, and in the following August he took off the instrument, without consulting any one, in order to resume his work. Although the treatment was discontinued unadvisedly, it proved not to be with any adverse result. The patient was seen and closely examined in the following January, but no vestige of the disease could be discovered. The movements of the head and neck were perfectly natural. The immediate relief from pain on the application of the spinal assistant, and the subsequent rapid disappearance of all the other signs and symptoms of the disease, proved that it had been arrested before any of the vertebral structure became involved, and shows how important is a diagnosis of the disease before that occurs. The treatment, which was carried out by Dr. N. M. Shaffer, became a matter of a few months instead of years, and there was a perfect restoration of the functions of the spine at the affected point, instead of anchylosis.

This case was again seen a few months after, and the cure as given above confirmed.

IODOFORM IN DISEASES OF THE THROAT AND NARES.

By R. P. LINCOLN, M.D.,

NEW YORK.

Though iodoform is recognized by a few as having some value as a topical remedy, its use seems to be directed almost entirely against venereal manifestations. Even here I do not think its advantages fully appreciated, and the completeness of my conviction impels me to transcribe the subjoined examples from my case-book as proof of its claims to a wider field of usefulness, and as an inducement to others to try a remedy that will realize high expectations.

We are indebted principally to French surgeons for bringing it to the attention of the profession, among others, Morétin, Bouchardat, Lailler, Férćol, and especially Demarquay.* The published accounts of their experience are not calculated to lead one into the error of limiting its applicability to any one class of diseases. In reference to this point, Férćol says: "Et je dirais volontiers, avec M. Besnier, qu'on peut user du procédé toutes les fois qu'une plaie présente une résistance notable à la cicatrisation." † I am prepared to testify to its great usefulness wherever there is an ulcerated or granulated surface whose cicatrization is sought.

It would be beyond my province here to give its chemical, physiological, or therapeutical qualities, yet I desire to refer to the remarkable fact, that, while it contains more than 96 per cent. of iodine in its composition, its application to a highly inflamed and sensitive part is unattended by pain; and while its effect shows it to act as a stimulant, it is at the same time a local anæsthetic.

It was in 1867 that Dr. Sass first called my attention to its wonderful influence on venereal ulcers; since then, when opportunity offered, I have gradually extended its use on ulcerations of the larynx, pharynx, and nares, other than syphilitic.

Did space permit, a large number of cases might be quoted; the following may therefore be considered typical of diseases often met with in treating the upper air-passages, and I believe the experience of others in similar cases will verify my own. As in the cases quoted, the most brilliant results usually attend its use on lesions the result of a venereal taint, and in these iodoform might replace all other remedies for local medication; yet, as in these cases also, the cicatrizing process of ulcerations not venereal is sometimes equally rapid, and almost at all times ultimately complete. The only obstacle to its free use is its peculiar and persistent odor, which to some is very disagreeable, and even intolerable; while, on the contrary, many do not object to it. There is also quite a large class where its use is indicated that have lost the sense of smell, that of course are indifferent to it.

Case I.—Mr. L, a lawyer, about 40 years old, consulted me for persistent epistaxis January last, at the suggestion of Dr. Francis Delafield. Patient stated that in other respects he had always enjoyed robust health, and that there was no hereditary cachexia to which he was subject. He traced back his present trouble to a cold which afflicted him eight years before, since which time he had been subject to frequent and often copious hemorrhages from the right nostril. During the last three or four years they have been of almost daily occurrence, with rarely an intermission of a week, and then usually the temporary effect of treatment. Latterly these attacks have sometimes occurred at night, the patient being awakened by the blood flowing into the throat. The effort of sneezing or coughing would almost always excite bleeding, as would also stooping forward, as in the act of washing the face; even the sudden jar of stepping from a curbstone would bring on an attack. The flow could usually be controlled by compression at the junction of the right ala with the lip, and as a precautionary measure a roll of paper was usually worn under the upper lip, against the reflection of its mucous membrane, which by a tension of the parts kept up slight but constant pressure. During all this time there had been a muco-purulent discharge from this nostril, varying in amount, but never entirely absent, and appearing posteriorly as well as in front. There was in the right ear slight but variable deafness of recent date. The general health was but slightly affected, the only complaint being of a feeling of weakness, experienced only after the loss of an exceptionally large amount of blood. The amount lost each day varied from a drachm to several ounces. The patient first presented himself to me with his handkerchief at his nose, staying the flow of blood, but otherwise appeared to be in perfect physical condition, and his cheek had not entirely lost the ruddy color that was natural to it, though he stated that he was sometimes blanched by the loss of blood.

It was impossible to obtain a satisfactory view of the parts at this visit, because of the free flow of blood which seemed to ooze from every part of the interior of the nostril; and after the failure of ice-water to check this and leave the parts in a condition to be examined, a spray of perchloride of iron was resorted to, which was at once successful. On the following day, after the nostril had been thorough-

* *Bull. Gén. de Thérap.*, Mai 15, 1867.

† Op. cit., Mai 15, 1868, p. 403.

ly cleansed by syringing and the use of pledgets of cotton, an examination revealed an ulcer on the septum, extending from within half an inch of its margin, superficially, as far back as a view could be had; its cartilage was exposed in many places, while at others a granulated surface presented. On the outer side the covering of the turbinated bones was of a mulberry-like appearance, being everywhere apparently covered with fine granulations, which bled on the slightest touch. A view posteriorly afforded an appearance similar to this last on the turbinated portion, while the mucous membrane of the whole posterior nares, particularly that on the right side, was hypertrophied and congested. The patient thought he had tried every known method of treatment, having been "swabbed" with nitrate of silver, and having used in the form of a douche or spray preparations of tannin, iron, alum, and other astringents, besides having taken internally tonic and anti-hemorrhagic remedies.

Treatment.—After carefully freeing the passage of all secretion, I applied powdered iodoform to the diseased surface, and gave the patient an ointment of the same (℥ i. ad adipis ʒ i.) to be applied every night with a camel's-hair pencil, the parts being previously cleansed as well as possible. A light piece of cotton was directed to be worn in this nostril when the patient was out of doors, which served as a respirator. This treatment, without modification, was continued for six weeks, when the membrane appeared healthy and all symptoms of disease had disappeared. There was no epistaxis after the first ten days of treatment, and the catarrhal discharge ceased at the end of the fifth week. At this time, five months since the patient was discharged, there has been but one hemorrhage. This occurred three months ago, during an attack of influenza, and consisted of but a few drops, and stopped spontaneously. Though treatment was resumed for three days, it probably was not necessary.

Case II.—Mr. M., aged 35 years, a resident of Brooklyn, consulted me at the direction of his family physician, Dr. Conklin. He was in the third stage of phthisis pulmonalis, but the suffering from a throat complication was so excessive that it outweighed, in his own mind, the graver trouble below, and the hope of securing an amelioration of the torture depending upon this part of the disease was his reason for coming to me.

He complained of great pain in his throat, and for the past three days of inability to swallow anything; this pain and difficulty of deglutition were much aggravated by the effort as well as by the act of swallowing. In addition to the dread of these symptoms was that of spasmodic coughing, which was now sure to follow any attempt at deglutition. These obstacles had at last become so great that the sufferer could no longer summon the courage to persevere, though it had been but a few weeks that annoyance from this source had been sufficient to modify his habits or facility in eating. The patient presented all the symptoms of advanced phthisis, including aphonia. A laryngoscopic examination revealed a larynx possessed by all the characteristic lesions of laryngeal phthisis—a thickened and gnawed epiglottis, arytenoid tumors, pyramidal in shape and œdematous, the left and larger being superficially ulcerated and covered with a tenacious, glairy mucus, while the other was smaller, and of a dark red, congested appearance. The vocal cords were thickened and fleshy in color.

Treatment.—Incisions were made in each tumor to relieve the congestion and particularly the œdema. A solution of iodide of zinc was applied by the spray-producer to the vocal cords, and powdered iodoform, by means of a tube properly curved for that purpose, to the epiglottis and arytenoid tumors. Applications were made daily, and after the second the patient reported he could swallow comfortably, better than for two months. After the first week iodoform was alone used.

For eight weeks, though the pulmonary disease was exerting its wasting effect upon the general system, there was an evident effort at repair in the larynx, that was partially successful, as shown to an observer by the diminution of the extent of the disease, and evident to the patient by the continued mitigation of the pain and greater ease in deglutition. Finally the patient became so much reduced that he was compelled to discontinue altogether his visits. The effect of the iodoform in preventing the local pain would last one to three days, within which time it was necessary to repeat it, and while this could be done with a moderate degree of regularity he could take nourishment with comparative ease. During the last week of his illness, which occurred ten weeks after his first visit, he sent for me three times to visit him in Brooklyn and "apply that powder," so much comfort did he anticipate from it.

Case III.—Early in my use of iodoform as a local remedy in diseases of the nasal organs, occurred the following case of ordinary nasal catarrh that had resisted other measures. The patient was a young lady, eighteen years of age, from the interior of Pennsylvania, and applied to me in February, 1868. Her health had never been impaired except from nasal catarrh, and from this she had never been free, though usually incommoded less in the warm weather than at other times. She was of a strumous diathesis, evinced by the complexion and enlargement of the glandular tissue in different parts of the body. There was a complete absence of the sense of smell, while the odor of her own breath was offensive to others. The discharge was muco-purulent and purulent, with heavy crusts thrown off both from the nostril anteriorly and sometimes expectorated. There was almost constant frontal pain, and the tear often overflowed from obstruction in the duct. On examining anteriorly, there was found a submucous infiltration and hypertrophy of the tissues nearly sufficient to occlude the passage of the left nostril, while the mucous membrane itself was congested and covered with a muco-purulent secretion. The right nostril was quite free, except where obstructed by crusts, the removal of which disclosed an ulcered and unhealthy surface. So far as could be ascertained there was no exposure or exfoliation of the turbinated bones, but the tissue covering it readily broke down under the manipulation of a probe. On examining from behind the palate, the posterior portion of the turbinated bones appeared similar to what was found in front, though naturally paler, and the other parts were generally hypertrophied, with spots of ulceration scattered over the surface. The hypertrophy of the adenoid tissue of the vault was strongly marked. There was also mucous and submucous thickening of the pharynx. She had undergone much treatment, having tried variously medicated nasal douches, and had had applied "caustics" by means of a sponge and brush; iron had been taken internally; but all these means, as well as a year's residence abroad, were of no avail.

Treatment.—The patient submitted herself to almost daily treatment. The passages having been thoroughly cleansed with a weak solution of compound tincture of iodine by means of a posterior nasal douche, any crusts being removed by instruments when necessary, a fine spray of tannin and glycerine was applied

to the left nostril, and a saturated solution of nitrate of silver to the right nostril, posterior nares, and pharynx. In a few days chromic acid was applied to the tonsils to reduce their slight enlargement. Cod-liver oil, which she had never before taken, was prescribed. At the end of two weeks there had been an improvement in all the symptoms, and an examination of the left nostril warranted a verdict of well, anteriorly; while from the right and from the posterior nares there was still some of the old discharge. Everywhere here the mucous membrane presented a healthier appearance; there was less thickening and a better color, though considerable ulceration remained. The tonsils and pharynx required no further attention. The frontal pain had ceased. The same treatment was continued in the right nostril and posterior nares another fortnight with but little additional benefit, though there was no longer any complaint of the overflow of the tears. The use of the nitrate was then discontinued and an ointment of iodoform substituted, which in turn was abandoned in a short time for powdered iodoform. For ten days this was freely spread over the diseased surface, at the end of which time there was no discharge from the nostril in front, and but little from behind.

An examination at this time showed the mucous membrane to be everywhere healthy, except the adenoid tissue of the vault, which was still rough and thickened. Chromic acid was then thoroughly applied to this part, and when the slough had separated, iodoform effected a restoration of a healthy surface, when all the symptoms of a catarrh had ceased. The patient was discharged ten weeks from the beginning of treatment. The following autumn, and again a year later, she reported herself as remaining well.

Case IV.—Mrs. P., aged 40 years, applied to me at the suggestion of Dr. Roosa, June 30, 1873. She has been twenty years married, is the mother of four children, the eldest eighteen and the youngest three years of age; all of whom are strong and healthy, except the second, a daughter, who is a deaf mute, the effect of scarlet fever. Her own parents as well as her grandparents were healthy, and exceptionally long lived. She has two sisters and one brother living and healthy; one brother, previously healthy, died two years ago of an acute disease.

Her husband stated that he had always been free from any disease.

Our patient was vaccinated in her fourth month with virus from another child. Though a robust infant before, from this time she became sickly and feeble, and remained so for two years, when she had an attack of "erysipelas of the face and head," after which she became strong and well. She remained apparently healthy until 1862, when an eruption appeared on the face and ears. It was not itchy, and terminated in white scales, and disappeared without leaving any discoloration, in three or four weeks, under the administration, according to her physician, of arsenic.

There was no fever at this time, and she was confident there was no analogous condition of the scalp, though she remembers the hair fell out so as to require attention.

She dates the beginning of her present trouble from a cold in the head, caught while on a trip up the Mississippi river in April, 1864. On reaching this city she consulted a skilful and distinguished surgeon, who pronounced her affection "catarrh of the head," whose treatment she followed for some months, taking medicine internally as well as having local treatment, but all "without avail." Homœopathic treatment was then adopted for a couple of years, after which she consulted a specialist, who told her that "by a great deal of cutting and burning" he could help her.

She gave me a list of thirteen different physicians, of various practices, with an apology that it was so incomplete, to whose treatment she had subjected herself, and who with confident assurance pronounced the affection a "purely local disease," others "a scrofulous," and still others "a blood disease."

In 1867 the disease had extended to the throat, where, from that time, some degree of ulceration has almost constantly been present.

In August, 1868, the first splinter of bone came away from the nostril, and during the succeeding four years a dozen or more pieces, at irregular intervals, appeared in the discharge, principally from the mouth.

During this period of more than nine years, except early in the disease a temporary amelioration of a week or two, usually after taking "potash," she has been subject to a muco-purulent discharge from the nose and throat. This symptom has suffered frequent exacerbations on the access of any slight cold, to which she seems to have been exceptionably susceptible. Though the appearance of the diseased parts was so repulsive when she visited me, there was no perceptible taint to her breath. The sense of smell was lost early in the disease, and that of taste impaired. One year and a half ago she became deaf in her left ear, and remains so now. Early last April she suffered an acute attack of "erysipelas of the face and head," since which her old disease has been much worse, and her strength more impaired than ever. For several weeks previous to her visit to me the difficulty of deglutition had constantly increased, and had at last become so great that her husband said, "She is literally starving." Whenever, notwithstanding the pain, she did attempt to swallow, spasmodic coughing would ensue, to be followed by attacks of dyspnœa.

The patient entered my office supported by her husband, and presented the appearance of a person much reduced by protracted illness, exsanguine, but not extremely emaciated; stooping, and breathing through her open mouth with an audible sound. She spoke only in a whisper, and then with evident difficulty after several attempts to clear the throat. The bridge of her nose was depressed nearly to a level with her face. Several of the left cervical glands were each as large as small filberts, and were so before the throat-trouble. There were none enlarged behind the ears or at the elbows.

Pulse 75 and weak. Temperature normal.

The swollen and displaced parts within the nostrils, which were everywhere ulcerated, prevented a satisfactory examination anteriorly. No air could be forced through the nostrils on expiration, but on the most powerful inspiration the least air passed in, though through which it was impossible determine. On inspecting by the mouth, there was found a muco-purulent secretion covering the palate, pharynx, larynx, and posterior nares, which it was necessary to remove before the condition of the concealed surface could be determined. It was then found that the uvula had been entirely destroyed, and the palate cleft in the median line to the extent of nearly half an inch. The free border of the palate was occupied by an ulcer half an inch deep on its inferior aspect, which was continuous, with a similar condition on its posterior and nasal surface, as well as upon its arches, and even in the larynx. The posterior and lateral walls of the pharynx were covered with a fibrous-looking membrane, firmly adherent, and with no appearance of an attempt at granulation. Below, this condition extended beyond the point of contact with the larynx,

and above, in the pharyngo-nasal portion, it gradually gave place to a state of ulceration, unhealthy granulation, and thickening, which obtained throughout this cavity. The epiglottis, and the interior of the larynx, but particularly the glasso-epiglottic folds, were so swollen as to prevent a view of the vocal cords; and this whole surface seemed to be occupied by one ulcer, continuous with that already described. On account of the infiltration and thickening, neither the faucial extremity of the Eustachian tube nor the posterior border of the turbinated bones could be seen with the aid of the rhinoscope.

Treatment.—The discharge having already been removed so far as possible, I applied freely to the whole diseased tract, in the form of a fine spray, a solution of sulphurous acid and glycerine—seven parts of the former to one of the latter—and prescribed a gargle of carbolic acid, water, and glycerine, and internally iron and iodide of potassium; there was also advised an eggnog twice a day, and a clyster of beef-tea morning and night.

June 1.—Patient had been able to take the medicine and a few spoonfuls of nog. The enemas were well retained and gave strength. There was no change in the disease, and the following prescription was substituted for the first, a dessertspoonful of which was ordered to be taken three times a day: R. Hydrarg. iod. rub., gr. ij.; potass. iodidi, ʒ iss.; vin. pepsin. et syr. simp., āā ʒ iij.

June 6.—Complained of tenderness of teeth. Though the full dose of the medicine had not been taken, it was stopped entirely, and chlorate of potash ordered to be used internally and as a gargle.

There was still no satisfactory change in the comfort of the patient or in the appearance of the throat, except a slight diminution of the inflammation bordering the ulceration on the palate, though nitrate of silver and also carbolic acid had been tried in place of the sulphurous acid.

An application of acid nitrate of mercury was then made to the whole pharynx, and extended cautiously to the posterior nares and the most prominent parts of the diseased larynx; this caused excessive pain and necessitated a dose of morphine.

At the expiration of a day and a half the slough made by the application had almost entirely separated, leaving exposed a pale, granulating surface. Powdered iodoform was then daily applied to the whole surface, including the nasal passages.

June 9.—There was a marked improvement throughout the diseased tract, a healthy action being everywhere established. The patient stated she could swallow so much better that she had eaten a piece of beefsteak, the first for several weeks, and had resumed the nog in full doses. The tenderness of the teeth had nearly passed away. Cod-liver oil was prescribed.

So symmetrical, laterally, was the character and extent of the disease, that to the right half I applied a fine spray of nitrate of silver (ʒ i. ad aq. ʒ i.) and continued the iodoform on the left half.

June 14.—The process of cicatrization was so much more rapid on the left side than the right, that I did not feel justified in a longer use of the silver, and therefore extended the iodoform application to the whole surface. The stomach proved too feeble to retain the oil, and as our patient was gaining rapidly in every particular, no further attempt was made with internal remedies; she could now swallow without pain, though it required care and deliberation in deglutition to prevent food passing into the pharyngo-nasal cavity. Air now passed through the nostrils, but not with sufficient freedom for easy respiration; phonation was easy, though hoarse.

She was now instructed in the use of the throat douche and posterior nasal syringe, by means of which was used as a douche the fluid ordered for a gargle.

The only additional modification introduced during the remainder of the treatment was the occasional use of chromic acid to check any exuberant granulations, or to prevent undue contraction that sometimes threatened during the process of cicatrization.

The iodoform was continued almost daily till July 28, when she was discharged, there being no further symptoms of disease.

A NEW TREATMENT FOR THE PREVENTION OF HYDROPHOBIA AFTER INOCULATION.

By PALUEL DE MARMON, M.D.,

KINGSBRIDGE, N. Y.

On the 28th of June, 1871, Ella ——, of New York, was bitten by a dog, which, according to all the evidence, as hereafter described, was rabid. I saw the child one hour after the accident: a piece of the right cheek, about the size of a silver-dollar coin, irregular in shape and depth, had been torn out by the animal. She also bore the marks of the dog's teeth upon the right arm and leg.

I cauterized the wound immediately with a saturated solution of carbolic acid, and had it kept wet constantly with a weaker solution of the same. I ordered, besides, two drops of liquor ammonia fortis to be given every two hours in water.

June 29th.—The little girl slept well, is in good spirits, has good appetite, and no pain. June 30th.—Continues to do well. July 1st.—Increased the dose of ammonia to three drops; wound cauterized upon the edges with nitrate of silver to correct some irregularities in the cicatrix. The same treatment was continued until August the 9th, and was religiously followed; the wound was not allowed, during the whole time, to be dry a single instant, thanks to the unremitting attention of a devoted mother. On the 10th of August the wound was entirely closed, and the cicatrix, healthy and regular, reduced to about one-tenth of its original size, and without a single bridle.

It is now two years since the accident happened, and no symptoms of hydrophobia have made their appearance. I think I am well authorized to suppose the patient out of danger.

The Dog's History, and Post-mortem Examination.—The dog, which was totally unknown in the neighborhood, was lying in the coachman's room, under the bed. When the man entered his apartment the animal looked at him and walked out. It then attempted to pass by the patient's sister, a little girl seven years old, and did not appear to notice her; but when it went by the patient, this little child, probably on account of fear, made a motion with her hand as if to drive away the animal. It was at that time that the dog sprang at her and bit her.

The dog was chased by four men, and finally caught and killed. During the chase he bit a duck, which was killed a short time after. The dog was first struck on the back of its neck with the butt-end of a whip; it did not yell, but only groaned slightly. In the chase given to him he did not seem to get out of the way when any of the men were in front of him in a threatening position—when he was at last struck to the ground

with a hay-fork, without yelling or attempting to defend himself, and was then clubbed and his head broken.

Autopsy was made 15 hours after death, June 29th. Rigor mortis very pronounced, no signs of decomposition, no smell; all the internal organs were healthy, the gall-bladder very full, the lungs slightly congested, the blood extravasated in the splanchnic cavity was dark and liquid.

The stomach was rather small, and contained a quantity of *hair, mud*, two whole *humble-bees*, one large *butterfly* with wings almost intact, one small *white mushroom*, some *straw, grass*, and the piece of the child's cheek nearly all digested but the skin.

The mouth was filled with bloody froth, and on the tongue—that is to say, beneath and on the sides of it—some small pustules, varying from the size of a millet-seed to that of a grain of wheat, irregular in shape, and filled with a light, whitish liquid, could be plainly observed; I counted twenty-three of them. These, in all probability, were what has been described by some authors under the name of *Lyssæ*, and supposed by them to contain the rabid virus.

The above data display undeniably all the features of hydrophobia in the dog as described by authors; and in fact, who ever heard of a dog in a normal condition having such polyphagous propensities? On the contrary, when he is mad "the stomach contains a strange mixture of straw, hair, paper, hay, horse-dung, and earth." (*Clymer's ed. of Aitken's Practice.*) "The dog who is mad swallows, *pêle-mêle*, objects the most foreign to alimentation" (*E. Littré et Robin in Dict. de Nysten, 12th edition*). "It eats the straw of its bed, horse-dung, excrements, pieces of leather, wood . . . . in him there is no feeling; he may be beaten, struck, burned, without uttering a complaint" (*Nouveau Dict. des Sc. médicales et vétérinaires*). "Very frequently we can see him eat his litter, pieces of wood, earth, etc. The knowledge of this fact has a great importance, because, in making the autopsy of the rabid dog, we find in his stomach all the substances which have not been subjected to digestion, and that in this we have a proof of the disease" (*A. Trousseau, Clinique méd. de l'Hôtel Dieu*). "A mad dog does not always refuse to eat, but a fact quite remarkable and characteristic," says M. Bouley, "is the depravation of appetite; the animal may be seen to tear, destroy, or swallow objects not made to eat; and one should always mistrust a dog which tears with obstination carpets, blankets, pillows, or eats wood, earth, litter, etc." (*Girisolle, Pathologie interne.*)

As we may easily see by the above, eminent authors agree upon this point of pathology, and confirm my views of the case I have reported. It is true that cases of hydrophobia have been cured spontaneously; but nevertheless, the treatment by carbolic acid may be tried again in combination with ammonia, and I should be happy to hear of any other case where it may have been successful.

KINGSBRIDGE, NEW YORK.

REMOVAL OF A FRAGMENT OF CATHETER FROM URETHRA BY DIVULSION.

By AMBROSE L. RANNEY, M.D.,

NEW YORK.

CASES of foreign bodies in the urethra or bladder are not of common occurrence in private practice.

Dr. Weir, of this city, reported a case in THE MEDICAL RECORD of 1868, where he removed from a female bladder a hair-pin, covered with urinal incrustations to the amount of twenty-nine grains.

Dr. J. M. Reeves, of Dayton, Ohio, reports a case* where a pregnant woman, troubled with frequent retention of urine, broke off some inches of a male flexible catheter in her bladder, where it remained for a sufficiently long time to be heavily incrustated before removal.

Several cases of pessaries being removed from female bladders are on record.

Dr. Post, of this city, reports a case of perforation of the male bladder,† in jumping over an upright stick, a piece of cloth being carried into the cavity of the bladder, where it acted as a nucleus for a vesical stone, which was afterwards cured by lithotripsy.

Dr. C. M. Allin reports a case in which a fragment of an ivory pen-handle was removed from a male bladder, having been introduced during an attempt at onanism.

Dr. Pancoast, of Philadelphia, also removed a portion of a slate-pencil from a male bladder, passed there through similar indulgence.

Dr. Van Buren, of this city, removed from the bladder of a patient in Bellevue a calculus, of which the nucleus was composed of a head of wheaten straw, passed down the urethra, by an old man, for sexual excitement.

Dr. Jas. R. Wood, of this city, reports a case of removal of a pewter spoon-handle from a male urethra. Also a second case, where a leather string was passed down a male urethra into the bladder, and there rendered incapable of removal by a *knot* having formed.

A case is reported in which a female malingerer would frequently resort to the insertion of pieces of common brick, carefully oiled, into her bladder through her urethra.

Mr. Tyrrell, of London, reports a case of extraction of a piece of a silver catheter from a male bladder, using his rectal touch to retain the foreign body in position till it could be grasped with forceps.

Mr. Lamotte removed a PIN from a female bladder by allowing it to drop into the eye of a catheter, and thus withdrawing it.

In connection with these few cases and many others which have been reported, I take, therefore, the liberty of presenting to the attention of the medical profession the following history:

John R——, 35 years. Patient was sent to me by a neighboring physician, at 7 P.M., April 21, 1873, suffering from retention of urine. He, however, succeeded in fully evacuating his bladder, without assistance, soon after, and therefore postponed his visit to my office till 8 A.M., April 22d, when he gave me the following history: No syphilitic lesion, hereditary or acquired, had ever appeared; family history good; general condition excellent. Some five years previous to date he was attacked with a gonorrhœa of no unusual severity, which lasted about three months. Since then had suffered from numerous similar attacks, but could not give exact data as to period of occurrence or length of duration. Noticed a diminution in size of stream one year previous to date, and had frequently resorted, since then, to the passage of a flexible catheter, corresponding to a No. 5 (English measure), which, with difficulty, he himself passed till urine escaped.

On April 22d, while endeavoring to introduce his

* *Medical Times*, 1870.

† THE MEDICAL RECORD, 1872.

catheter, he failed to pass an apparent obstruction "deep down in his urethra," and on withdrawing the instrument found that it had *broken* above the eye, the fragment remaining either in the urethra or bladder. On calling on a physician, efforts were made to relieve his retention, which were partially successful, and he was then sent to me for treatment. I instructed patient to pass water for my inspection, which he did without much exertion, in a small spiral stream, to the amount of about ℥iv. On examination it revealed the existence of large quantities of phosphates, but no albumen or sugar; was dark sherry in color: neutral in reaction; sp. gravity 1024. On examination of his urethra with flexible *bulbous* instruments, the meatus was found to admit a No. 15, which was immediately arrested in the "fossa navicularis." Subsequent trial of smaller sizes allowed of the passage of a No. 8 through this obstruction for the distance of two and a quarter inches from the meatus, when a second obstruction was met, and the instrument arrested. This allowed of the passage of a No. 6, when a third structure was detected, just anterior to the bulbo-membranous junction, measuring five and three-fourths inches from the meatus, and which failed to admit any bulbous instrument. After carefully injecting the urethra with oil, I succeeded in passing a spiral guide of whalebone into the bladder, without pain or particular inconvenience to patient, during the passage of which, however, I discovered that the orifice of the lower stricture was slightly to the right of the median line, and near the posterior urethral wall. This I did by the old method of so directing the points at the two extremities of the guide, that the FREE extremity should serve as an accurate index to the position of the one entering the mouth of the urethral obstruction.

Realizing the danger which the patient would necessarily run should so admirable a nucleus for a vesical calculus be allowed to remain, even for a short time, in the bladder—especially when the urine was loaded with a phosphatic deposit—and feeling confident that, could *dilatation* be rapidly performed, the broken extremity of the catheter, with its long axis in the direction of the urinal current, would pass through the urethra before any crystallization of urinal salts could occur, I proposed, before withdrawing the guide, to begin dilatation at the first sitting, without submitting the patient to a previous preparation by internal administration of Tinct. Ferri Mur. and Quinine, by which I believe great assistance is often afforded.

Accordingly, Nos. 3, 5, 7, and 8 tunnelled conical sounds were successively passed over the guide, with no appearance of rupture at seat of stricture or great pain to patient.

Solid conical sounds were then substituted and the guide withdrawn. Nos. 7, 8, 9, 10, and 12 were passed, when a slight appearance of blood, scarcely a *drop* at the most, indicated *divulsion*. Nos. 13 and 14 were then passed, and 10 grs. of quinine given to patient, with directions to take a hot bath immediately on returning home, and to be repeated night and morning for the day following.

That night, on the first attempt at micturition, the fragment of the catheter was passed, and the patient brought it to my office on the following day. On measurement it was found to be seven-eighths of an inch in length, and showed no deposit on its surface, though it had been retained in bladder thirty-six hours. Patient has experienced no unpleasant symptoms since divulsion. He has had No. 14 sound passed every other day up to present time, and urinates in a copious stream, without twist or any abnormal direction. A No. 12 bulbous instrument, however, still slightly shows the seat of former obstructions.

69 MADISON AVENUE.

Progress of Medical Science.

ELASTIC BANDS IN THE TREATMENT OF FRACTURES.—Dr. J. W. Southworth (*Buff. Med. and Surg. Jour.*) advocates the use of elastic retention straps in place of the ordinary retention bands or bandages in the treatment of fractures. These elastic straps may be improvised by taking the common rubber bands, one-fourth to one-half an inch wide, as sold by stationers, doubling them and passing strips of muslin through them, making it part of the strap, and thus allowing it to be stretched to the degree deemed advisable to exert a proper amount of constricting force when applied around the splints. In fractures of the fore-arm about four are required, in fractures of the leg and thigh proportionately more, the elastic portion being placed alternately on opposite sides.

This mode of dressing retains an even adaptation of the splints, whatever may be the condition of the limb as regards swelling.

A CHILD DIES BY VOMITING INTO ITS OWN LARYNX.—A little boy, aged one year, was fed in superabundance from a bottle, and put to bed at 6 P.M. At 12 M. it died, under symptoms of the most profound dyspnœa. On section, the two lower lobes of the lungs were found stuffed with a grayish fluid having a strong odor of butter. Altered milk was found in the trachea and bronchi. The milk contained in the stomach must have been vomited, and the child being in a horizontal position it found its way into the respiratory passages. Dr. Parrot narrates the case, considers this accident to be more frequent than is generally believed, on which account he calls to it the attention of fellow-practitioners.—*Rivista Clinica di Bologna*, July 25, 1873.

UTERO-PLACENTAL VACUUM.—Dr. H. G. Landis, in the *Medical Times* of April 12th, reports a case of retained placenta, which he caused to be easily delivered by simply perforating it. He did this from the consideration that the placenta resembled, in one respect, a boy's leather "sucker."

NATURE OF MUMPS.—Dr. Bouchut, in a note communicated to the Academy of Sciences by Claude Bernard, states that parotitis is simply a salivary retention due to catarrhal inflammation of the excreting canal of the parotid.

WRIGHT'S FORMULA FOR HEADACHE FOLLOWING ALCOHOL DEBAUCH.—The *Boston Journal* reprints the following, "for the use of prohibitionists," which originally appeared in the *Rev. de Thérap.* and *Canada Med. Record*: Take of solution of acetate of ammonia, tincture of bitter orange-peel, syrup of bitter orange-peel, each 20 parts, water 500 parts. To be given in repeated teaspoonful doses.

DIAGNOSIS OF UTERINE FIBROMATA.—Dr. Abeiller alludes to the mistakes in diagnoses which are liable to those who do not make their examinations during a menstrual period, since it is only at this time that the efforts of the uterus tend to expel these tumors, and they are therefore brought nearer to the os, causing unusual dilatation of the cervix and affording better opportunities for examination.—*Gaz. Méd. de Paris*, No. 11.

On Continuous Discharges after Delivery.—Dr. A. Wiltshire says that these discharges are most common among patients of the poorer class, who are, by the exigencies of their lives, obliged to rise too soon from the lying-in couch, and who are, moreover, as a rule, sadly under-fed, not only at and during childbirth, but before and after. More rarely are they met with in higher ranks of society, chiefly in constitutionally delicate women, or in persons who have become weakened by too rapid child-bearing, or other debilitating causes. All classes alike are apt to blame their medical attendant for the persistence for some time of sanguineous discharges, in the belief that they are due to negligence or want of skill on his part.

The cause of this condition is due, in the great majority of, if not all, cases, to subinvolution of the uterus.

Involution should progress equally in every part of the womb, so that at the end of the process the normal relative proportions should be maintained; especially does this apply to that portion corresponding to the placental site where the uterine wall is thicker than elsewhere. It is here, however, that the process most often fails, leaving a surface prone to discharge blood and other fluids; and it is here, the author believes, that the persistent "colored shows" and "waters" mostly originate.

These cases are characterized by the persistence, with it may be occasional remissions or intermissions, of a sanguineous (red or greenish) flow, which sometimes weakens the patient to the extent of interfering with lactation. Subinvolution is liable to persons affected with heart disease and chronic diseases which are accompanied with marked congestion of the venous system, as chronic bronchitis with emphysema, congestive liver diseases, etc. Feverishness hinders involution, and Joulin says the process does not actively set in until the pyrexia due to the establishment of lactation has passed away. It is, therefore, important to arrest all pyrexial complications. As regards the constitutionally feeble, in whom all vital processes are slow, absorption and restitution are not likely to progress very rapidly when the debility, which is normal to such persons, is intensified by the exhaustion of parturition, and the usual insufficient or improper diet to which lying-in women are commonly condemned. For such is a liberal diet especially useful.

Bi-manual palpation and measurement show in these cases excessive bulk. Ordinarily this coexists with increased length, but cases have been noticed in which the length of the axis was normal while the uterus was broader. On the relation of flexion and version to this condition Dr. Wiltshire does not lay much stress, remarking that "such accidents do occasionally complicate these cases, and aggravate them considerably."

Under the head of preventive treatment the writer impresses the necessity of prohibiting too early rising, and next regulation of the diet, the quality of which should be inversely proportionate to the quantity taken, due regard being had for the existence of fever, as determined by the thermometer, the habits and inclinations of the patient, and her intention to nurse the child or not.

Under the head of curative treatment he recommends the recumbent position, a firm bandage to the lower belly, and rich diet. Occasionally cases are seen in which there is an excess of nutrition, and subinvolution disappears under a regulated diet, potash or lithia, and aperients, and anti-rheumatic remedies in patients of that diathesis. Ergot is recommended, and digitalis; and strychnia in some cases complicated with heart lesions. Very striking results have followed the use of quinine, as suggested by Monteverdi. Gueneau de Mussy, at the Hôtel Dieu, has of late used it with considerable success in eight-grain doses for atonic menorrhagia.

Some patients, where nutrition appears to have failed seriously, improve wonderfully under arsenic. Anodynes, especially opiates, should be sparingly used. Syrup of iodide of iron is recommended as a tonic, sulphate of magnesia to keep the bowels opened, and local application of iodine to the hypogastrium when there is much pain. Injections, if used, should be copious, and the writer prefers cold to hot ones. Astringents may be introduced into these injections, if necessary, and good may often be derived from hip-baths, the author having a high opinion of sea-water for this purpose, as well as for injections.

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THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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

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New York, September 15, 1873.

THE HYGIENE OF PUBLIC SCHOOLS.

THE school system, lying as it does at the foundation of all good government, naturally invests every subject directly or indirectly connected with it with the greatest possible interest. As far as education pure and simple is concerned, great improvements have been made, and every friend of progress has no small reason for congratulation when he compares the present condition of our school system with what it was twenty-five years ago. Money has been expended liberally upon buildings, apparatus of the most costly character has been placed at the disposal of the child of the poorest, and from one point of view everything seems to have been done to keep up with the educational requirements of the age.

It would be well if we, interested as a liberal profession in education generally, could stop here, and with the majority who believe in the necessity of mental culture think that everything was being done to make the system as perfect in every respect as was possible. That the latter is not the case must be admitted by every one who gives the subject of school hygiene any attention whatever. The very efforts which have been made by our educators to cultivate the mind, the very desires they have had to develop the brain, have caused them to lose sight of another element of no less importance—the strictly sanitary requirements of the teachers and scholars. It is true, in view of the present ignorance of sanitary laws, even among men of education, we can hardly be surprised that the question of hygiene receives so little attention; but the fact only goes to prove the great necessity of medical men looking into the matter and raising their voices against the perniciousness of the present plan.

We are led to make some remarks upon the subject at this time on account of the opportunity which is offered us of presenting to the notice of our readers some important facts contained in a paper recently read before the New York Academy of Medicine by Dr. R. J. O'Sullivan, and also to many important points noted in the discussion thereon. The paper in question has the title of "The Hygiene of Primary Schools;" an abstract of which, with the discussion, has been published in a few of the recent numbers of the *New York School Journal*.

It will be recollected that Dr. O'Sullivan has for a year or two past, and up to the time that the Board of Education decided that sanitary supervision of the schools was unnecessary, acted in the capacity of medical inspector, and on this account the facts which he presents in his paper, founded as they are upon personal observation, are of peculiar value.

The most important point in the paper has reference to the earliest age at which a pupil should be admitted into our schools. It is very properly contended that seven years is a minimum age, not because mental exertion would be injurious to healthy intellectual growth, but because school life under its present hygienic surroundings is very unfavorable to the child's physical development. In other words, it is to be understood that although a child is capable of reasonable understanding and a limited amount of intellectual development prior to the seventh year, such education should be given it out of school and without the usual restraint.

In connection with the age of admission, the division of time in schools has a very important relation. There is no questioning the fact that the hours for study are too long in the infant classes. In corroboration of the above the following assertion is made, and although it proves an extreme case it nevertheless shows how much the little ones can be compelled to stand and yet live: "I have found primary schools in which the pupils were allowed no recess between their entry into the school in the morning and the dinner-hour, or between 1 o'clock and the hour of breaking up." In order to give the requisite amount of exercise to the muscles it would doubtless be necessary, in the infant classes at least, to modify much of the arrangement of studies; but we maintain that the end more than justifies the means. The younger the child the more danger there is from long-continued confinement. This is particularly the case before the seventh year, during which period the conditions of the rapid development of particular portions of the body demand an almost absolute freedom from restraint. This fact is well established by the remarks of Prof. Jacobi in discussing the paper.

In view of the large number of children who attend the public schools—estimated at one hundred thousand—and in view of the increase of certain diseases and bodily defects in children generally, it is sometimes interesting to inquire how much the present

school system has to do in explaining the relation between cause and effect. In the matter of the prevalence of near-sightedness in scholars, a very straightforward explanation is given by ophthalmologists. Graefe of Berlin, Cohn of Breslau, Erismann of St. Petersburg, and Agnew of New York, all of whom have had abundant facilities for observation, state that much of the eye diseases in pupils is due to the defects in lighting the rooms, inducing an undue exercise of tension in an effort to see; and Graefe has shown that a persistency in such efforts produces disease in the internal tissues of the eye. Bearing upon this question we quote the following remarks of Dr. C. R. Agnew, likewise made during the discussion of Dr. O'Sullivan's paper: "Every one familiar with our school and college life in New York, and elsewhere in the United States, knows that many of our school-houses are bad in light, bad in ventilation, bad in desks and seats, bad in the cramming to which the students are exposed. That near-sightedness and other forms of eye disease are rapidly increasing, and that the chances are against a lad or girl getting what is called a completed collegiate education without irreparable damage done to health and prospect of future usefulness, is certainly true."

Another great evil connected with our school system, and one which in the aggregate affects the health of the greatest number of scholars, is defective ventilation and insufficiency of heat in cold weather. To show to what extent foul air can be breathed in our school-rooms, we quote from the paper a little fact of experience: "Enter a crowded class-room in any of our school buildings in winter when the windows are shut. The oppressive atmosphere of that room is surcharged with carbonic acid gas, decaying organic matter, and moisture from the respiration and perspiration of the inmates. In some recent experiments made by an expert, the air of a class-room was found to hold, one window being open, carbonic acid to the extent of seventeen and two-tenth parts per ten thousand. That was surely bad enough, showing the presence of this gas in a proportion four times greater than the normal quantity. But warmth is essential as well as ventilation; and as the scholars were becoming chilled by the current of cold air entering through the open window, it had to be closed. After ten minutes a new analysis of the air was made, and the proportion of carbonic acid was now thirty-two and two-tenths per ten thousand. This test showed only the amount of carbonic acid gas; but the other poisonous elements of impure air are at least quite as injurious. I do not of course pretend to say that the air in our schools is generally as foul as this; but no sane man will affirm that in any of them the problem of ventilation has been anything like satisfactorily solved. It is not for the physician to indicate the mechanical contrivances which are requisite for the solution of it. That is a question for the architects, and they will answer it, I am convinced, if school boards will require them to do so. Let such boards only bear in mind that the 'style' of a building is not the question, and that the first and foremost care must be to secure good ventilation."

That the spread of contagious diseases is much promoted by the lack of the most ordinary sanitary regulation, is painfully evident to every physician. The school-room is in fact the very hotbed of propagation for scarlet fever, measles, small-pox, whooping-cough, etc.

If we were to give a cursory notice of the diseases which are liable to be engendered or propagated by the school system as at present tolerated, we could name almost every disease belonging to childhood.

There are many diseases directly chargeable to our faulty school management which may not be prevented, many ailments beyond the power of science to mitigate; but these are exceedingly few, the great majority of evils being such as can be remedied with very little trouble. The remedy which suggests itself to every medical man is the only one which can be looked to with confidence, viz., medical inspection. The unsanitary condition of our school-rooms, coupled with the forcing practice so fashionable in our schools, has been due to the want of the right sort of knowledge on the part of the teachers and others in authority. In spite of this very obvious fact, the Board of Education voted that sanitary inspection of the schools was unnecessary, and abolished the office of Medical Superintendent. Although Dr. O'Sullivan served the Board faithfully in the latter capacity, and would be well qualified to discharge similar duties in future, we do not care to advocate him any more than any other capable medical man. Our object is to speak against the discontinuance of the office as a matter of principle. That such a step on the part of the Board was radically wrong, and in every way injudicious, is more and more evident the more the subject is examined into, the more the facts connected with the whole system, founded as they are on actual observation, are appreciated. If it is not worth while to look after the health of children, which number in the aggregate a full one hundred thousand, as well as the teachers, which exceed two thousand, then we are wrong in our conjectures, and it may be useless to urge the necessity of reform. We confess ourselves unable to say how the Board can possibly dispense with medical inspection. There is, in fact, not a single one of the conditions to which we have referred which cannot be properly met and speedily remedied by the means adverted to.

We have already seen what medical supervision has done towards preventing the spread of small-pox: — of forty thousand pupils vaccinated under the supervision of Dr. O'Sullivan during a recent epidemic, every one escaped contagion. It may be urged that the Board of Health can look after such matters; but in

view of the immense amount of special work to be performed this is absolutely impossible unless special medical officers be appointed for that purpose. But we care not how the inspectors are appointed, so long as competent men are chosen to perform the duties.

As the case now stands, there is not only no medical inspection of our public schools, but, worse than this, medical inspection having been once instituted, is boldly and defiantly abolished. The duty of medical men in this matter is plain enough, and looks in one of the directions of good which they can accomplish as educators of the people and as creators of opinion upon all matters of hygiene. We appeal to the profession, and urge them to take this important subject under consideration, and use every endeavor to educate the people up to the point of appreciating, of demanding the necessary reforms. We are pleased to see so much attention given to the subject, and such efforts made in the direction of the necessary influence to be used, that in the discussion of the paper we can find such gentlemen as Agnew, Jacobi, O'Sullivan, and Peters to speak so earnestly and so much to the point upon the question at issue. Let the profession everywhere follow their lead, and if they act with determination they can create such a sentiment among their respective communities as no school board shall dare, even for political reasons, to disrespect.

The matter is too serious a one to pass by; the facts are abundant to prove the most shameful neglect of the health of the rising generation. We have the necessary data from the schools in this city where great pretensions are made towards perfecting the system of education, and it is fair to presume that the evils exist to a proportionate extent in other localities. In fact, it is reasonable to suppose that elsewhere there are, if possible, greater evils to overcome. Let the various medical societies throughout the country look into the matter; let even individual physicians impress the necessity of reform upon their patients; let every legitimate means individually and collectively be used to this end, and our legislators will soon trim their opinions to suit the demands of the people. A short time since we congratulated the profession that almost every school district in this city had a medical man upon its board; let these gentlemen do their duty as medical men, and, with their brethren throughout the city, not rest satisfied until they are fairly represented in the Central Board of Education. If the present Board of Education had but a single member from our profession, the resolution to abolish sanitary inspection of the schools would not have passed without a timely protest. We trust that the initiative has already been taken. In this connection we express our satisfaction that Dr. O'Sullivan's paper has been published, with the discussion thereon, in a paper that reaches a large class of thinking readers—readers who are ready and willing to appreciate the necessity for the reform advocated.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting June 26, 1873.

DR. E. MASON, President, in the Chair.

AN INTERESTING CASE OF CONGENITAL DEFORMITY.

DR. JACOBI exhibited a living subject, a male, aged nine years, who had a congenital deformity of the face. The deformity was confined principally to the left side of the root of the nose and the internal margin of the brow adjoining. It consisted of an hypertrophy of the skin and subcutaneous tissue, the redundancy being disposed of in vertical folds. Although this was an anomaly in its way, there were other peculiar features connected with the case which gave it interest in a pathological point of view, and threw some light upon the probable origin of the deformity already alluded to, and to the other changes to be noted. Associated with this deformity of the brow there was a marked lack of development of the corresponding side of the skull and face. On examination it was found that the left half of the face was decidedly smaller than the right, due to a lack of development of all its component parts. The left half of the chin was smaller than the right half, not only in its soft but in its bony parts; the same might be said of that side of the nose, the eyebrows, and arches of the frontal bone, the malar bone, and in fact all the bony walls of the left orbit, proportionately decreasing the size of the latter. The ears appeared to have been uniformly developed.

In searching for the cause of this deformity, the idea that the veins had been atrophied as the result of early meningitis had to be abandoned, for the reason that the extremities had not been involved—that the deformity was confined to a very limited portion of the body. This latter fact directed attention to the possibility of the trigeminus nerve being in some manner affected. In connection with this supposition there were other interesting points worthy of notice, viz., the groove of the hard palate of the left side was very deep, while that of the right was normally flat. This condition is one very frequently associated with certain anomalies of the cranium, especially at its base, which anomalies are due, for the most part, to premature ossification of the spheno-occipital synchondrosis. Although normally syndostosis does not occur until before the fifteenth year, bony union may take place as early as birth, or even in intra-uterine life. When the latter condition obtained, the sella turcica were small, also the alæ nasi, the middle portion of the cranium was very little developed, as well as the internal portion of the brain. The vomer was also retracted, the nose more or less sunken and retracted, the root of the nose broader than usual, giving more than the usual distance between the orbits. In connection with the above it may be stated that the general physical development of the child was tardy, and that there was a very low order of intellect.

Dr. Jacobi was inclined to believe that a syndostosis of the spheno-occipital articulation on left side might explain the malformations referred to. If such were the case the trigeminus nerve of that side would be retarded in its development, resulting ultimately in paralysis of its trophic and centric fibres. In proof of the latter, he instanced the fact that the soft palate reacted very slowly on being irritated.

In regard to the condition of the skin at the root of

the nose he believed it to be an angeioma due to mal-development of the trigeminus nerve and constriction of the cranial arteries, which conditions appeared to be due to the premature syndostosis, already alluded to, at the base of the brain. After the question of its pathology was settled, another came up in regard to treatment.

Dr. Sayre remarked that he had seen two or three similar cases, but in none was treatment of any avail.

Dr. Mason thought that the tumor might be an elephantiasis, and if he was right in his supposition he believed it would be best to remove the whole mass at one operation. As it might, however, prove to be an unusual case of angeioma, in which the cellular tissue predominated over the vascular, but in which the vascular element was nevertheless considerable, he thought it prudent to remove the upper portion of the mass first, and see what ultimate effect it might have upon the lower portion.

Dr. Putnam was inclined to the opinion that the malformation was due originally to cerebral hernia, and that this and other changes referred to by Dr. Jacobi could be explained by centric lesions of the brain itself.

MORBUS COXARIUS—CAN OPERATION ARREST WAXY DEGENERATION?

Dr. Sayre exhibited a specimen of morbus coxarius removed by operation from a boy æt. 11 years. The disease had existed for some considerable time, but the diagnosis of waxy kidney and waxy liver having been made out, it was decided not to operate. The patient, however, was so determined to have the bone exsected that he was constantly begging to have it done. Dr. Sayre finally consented to operate, in the belief that by arresting the discharge which produced the waxy degeneration of the internal organs he might not only relieve the patient of much trouble and suffering, but possibly arrest the secondary disease. The head, neck, and trochanters were removed in the usual manner. The patient vomited considerably in consequence of the anæsthetic, but was otherwise doing well.

Dr. Loomis did not think that waxy degeneration of the kidney was necessarily a rapidly fatal disease; on the contrary, he had known patients to live with it a number of years. He believed that the opinions of surgeons in regard to the dangerous influences which kidney diseases exerted over operations would be greatly modified when continued observation and experience should enable us to settle the real significance of the presence of albumen and casts in the urine.

Dr. Jacobi did not see any objection to the operation performed by Dr. Sayre, but, on the contrary, believed it to be perfectly justifiable.

Dr. Putnam remarked that patients did not commence to run down and die with amyloid degeneration until the deposit took place in the muscular coats of the stomach and the intestine; until such time there was always a reasonable hope that operations having for their object the lessening of long-continued discharges would result in benefit.

MULTIPLE FIBROUS STRICTURE OF THE RECTUM, WITH AUTOPSY.

Dr. F. D. Lente, of Cold Spring, presented a specimen, with the following history: Mrs. S., aged 32 years, of rather strumous habit, but in fair flesh, applied to me through her physician, Dr. House, of Haverstraw, for advice regarding a long-standing disease of the rectum. She has never been very strong since she was a girl. Her catamenia have always been regular. Has had children. The first symptoms of her present trouble showed themselves about eight years ago. Consulted a physician at that time, but, as usual in such cases, nothing was done. Has consulted, first and last, nine different physicians and surgeons in New York and Brooklyn—the last was Prof. F. H. Hamilton. He advised her, she says, to continue the treatment which she had been using at times for the past two years, namely, the introduction of bougies. She had never used one larger than a No. 11 urethral bougie. Notwithstanding their small size, their passage was painful, and the distress continued for about fifteen minutes after their withdrawal. About five years ago, noticed a purulent discharge, which increased for three years, and has remained the same ever since. It passes away in gushes, and unconsciously, sometimes falling, in quite a puddle on the floor. She has usually an evacuation daily, which is generally figured, though very small, and always flattened. She has to strain some fifteen minutes. She is in the habit of using an injection of water, or mucilage, or some application which is supposed to have a soothing effect; but they all give more or less pain. The evacuations are accompanied by a discharge of blood and matter. Two recto-vaginal fistulas have been discovered, which cause an increase of the soreness in the rectum, and allow the passage of pus and gas.

Middle of April, 1873.—On examination, I find a stricture at the upper border of the internal sphincter, but so much irritability both of the anus and the stricture as to render an anæsthetic imperative. Under ether I passed the index finger, with some difficulty, through the first stricture, and encountered another about 3½ inches from the anus, admitting the finger to the first joint; there are no irregularities or nodules. On examination, by means of Sims' speculum, the stricture and the surrounding membrane have a vascular, erectile appearance, and there is pretty free arterial oozing. Passed a very small-sized flexible, conical, rectal bougie through these two strictures without much difficulty. Advised injections of a sol. of carbolic acid, commencing with gr. xv. to the pint, about four ounces each time.

May 14.—Saw patient to-day with Dr. House. Better in every respect. Much less discharge since she commenced the injections, the strength of which has been increased to ʒ ss. to the pint. It is remarkable that they always cause a feeling of relief, the reverse of what she has experienced with any other. She has not been able to use the rectal bougie, but uses a No. 15 olive-pointed flexible urethral instrument, which is considerably larger than the instrument she has heretofore employed. It was intended that the sol. of acid should be washed out, after a few minutes, by a larger enema of warm water, but she never passes it, and it has no unpleasant constitutional effect in any way. On examination, find that there is very much less irritability of the rectum, so that I am able to pass the rectal bougie easily through the strictures without ether; but, on approaching the upper part of the rectum, there is more resistance, and pain is complained of; both these symptoms increase as the instrument passes on; but finally, and with no undue force, it passes into the sigmoid flexure. The pain shoots across the hypogastrium, and does not pass off on withdrawing the bougie. The existence of a third stricture is thus rendered very probable, and patient is aware of it herself, and very much discouraged, knowing that it is too high to be reached by the operation (free division) which I had proposed as a last resort for the others.

May 20.—The hypogastric pain continued, Dr.

House informs me, for three days, requiring her to keep her bed; it then subsided, and she has since felt unusually well. Heard nothing of the case, being absent from home, until the 25th, when Dr. House called me to see her, and gave the following history: That on the 22d she felt so much better that she went to the city on some business, returned feeling well; had a good night; and the next morning, on passing her flexible catheter through the strictures, as usual, in order to use the carbolic solution, and on reaching the situation of the upper stricture she felt a sharp pain, which shot across the hypogastrium, and increased rapidly in severity. On visiting her, the doctor found unmistakable evidences of a most dangerous peritonitis. The symptoms increased; the pulse ranging to 160; and the prostration, vomiting, etc., becoming constantly more alarming, notwithstanding the relief of the pain by hypodermic injections of morphia, until the afternoon of Sunday the 25th, when I was summoned. On arriving at Haverstraw, I found that the patient had been dead two hours. In the opinion of Dr. House and myself, there was no doubt of the cause of death, namely, a perforation of the bowel; and I ventured to diagnose the exact spot, namely, in the substance of the upper stricture, from the fact that, after the alarming symptoms had continued for some hours, she had a more solid and satisfactory evacuation than she had had for years.

Assisted by Dr. House, I made an autopsy three hours after death. On exposing the contents of the abdominal cavity, evidences of an intense peritoneal inflammation were at once apparent—dilated capillaries, and the viscera glued together everywhere by layers of lymph; a moderate amount of turbid serum occupying the pelvis. The upper part of the rectum was adherent to the right of the promontory of the sacrum, and on gently detaching it, the perforation, in the midst of the blackened tissue of the bowels, was found. The rectum was now dissected out and removed. On laying it open, it was found that the perforation had occurred, as had been predicted, just in the upper stricture. This and the other strictures were found to be composed of dense fibrous deposit, from half an inch to three-quarters in thickness. The whole rectum, from a point three-quarters of an inch above the upper stricture, was entirely denuded of its mucous lining, and exhibited the ashy surface seen after death from chronic dysentery. The other coats of the intestine were not at all thinned or weakened, even in the immediate vicinity of the perforation.

The particular interest in this case centres in two points: the perforation, and the unusual destruction of the mucous lining of the rectum. It is not easy to explain why this ulcer should have formed, and especially at such a point where the gut was reinforced by so thick a deposit of dense fibrous tissue, and where there had evidently been no preliminary softening of the tissues, even in the immediate vicinity of the circumscribed slough which gave rise to the perforation, unless the dilatation by the larger bougie on the 14th, eleven days before death, had set up an inflammatory action, which, in a tissue but imperfectly organized, might readily end in sloughing. The bougie passed in without force, having been only moderately grasped by the stricture, and requiring for its passage through it only a steady, equable pressure. It is impossible, in such a tissue as was found to have constituted these strictures, that any *tearing* could have taken place with such an instrument, which is merely an enlarged edition of the ordinary olive-pointed French flexible urethral bougie, is hollow and soft, and, in my opinion, the only kind of bougie which can, with any degree of safety, be used in dilating these strictures, more especially when distant from the anus. This was the only specimen recently sent as a sample by the French manufacturers to Tiemann & Co., of New York, and it is to be hoped that this enterprising firm will soon supply the market with them, and with similar ones for the œsophagus. Almost all strictures of the rectum are very sensitive, and it is quite common for severe pain to be experienced during their dilatation, and for severe symptoms to follow—often more severe than those which this patient experienced during the three days following the application. The improvement which ensued after these first unpleasant symptoms passed off, showed also that no laceration had occurred. Whether the ulcer existed previous to the dilatation or whether it occurred solely as a consequence of the slight bruising of an imperfectly organized tissue, the *fact* remains as another of the numerous warnings recorded by almost every writer on the subject, against the old method of treating all strictures of the rectum by bougies, which, though *apparently* simple and harmless, is probably the most dangerous. In this case, there was, unhappily, no alternative, this stricture being out of the reach of any other treatment, and it would have been useless to have attacked the others by any radical method as long as this remained unrelieved.

As regards the destruction of the lining membrane, I had already given the opinion that very extensive ulcerations existed, since the long continuance and the unusual amount of the purulent discharge could be accounted for in no other manner; but the extent of the ulceration actually revealed by the autopsy was entirely unexpected, especially in connection with simple fibrous stricture, and such as could admit of somewhat solid passages. The possibility of the existence of such a condition still further strengthens the position which I have elsewhere taken,* that the sooner a stricture of the rectum, even if not very close, is completely divided, and thus relieved at one operation, the less the danger which the patient will incur.

New Instruments.

A NEW VAGINAL SPECULUM.

By J. H. CHURCHILL, M.D.,

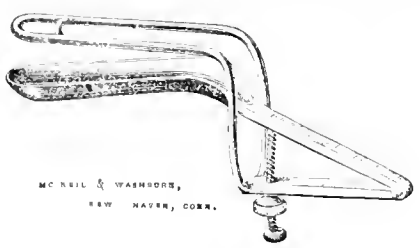
CROSS RIVER, N. Y.

It is perhaps easier to state the requirements of a good speculum than it is to fulfil the indications. New instruments are being constantly devised which are acceptable to a portion of the profession, but none satisfactory to the whole. There is, however, one broad principle of construction pretty generally received, viz., that it should be bivalvular in form.

As to the requirements of a vaginal speculum I make the following postulates: It should be, 1st, easy of introduction; 2d, self-retaining in situ; 3d, fully exposing the parts to be examined; 4th, giving as much room as possible for instruments; 5th, giving as little inconvenience to the patient as is compatible with the ends to be attained; 6th, of simple mechanical construction.

* *Am. Jour. of Med. Sci.* for July, 1873.

The accompanying engraving of my speculum sufficiently explains itself; I therefore give no description



of it. The idea occurred to me in the Fall of 1871, at which time I made a small model. In May, 1872, I had a full-sized instrument made, substantially as here represented, which has given me good satisfaction ever since.

In regard to some possible objections, I will say that the tissues do not drop through the wire blade to obstruct the view; and were the blade solid, or partially filled with two wires in the centre, one design of the instrument would be defeated, viz., complete exposure of vagina as well as uterus, and plenty of room for operative measures.

The patient may be examined à la vache or on the back.

The instrument is manufactured by McNeil and Washburne, New Haven, Conn.

CROSS RIVER, N. Y.

Obituary.

HENRY STEWART HEWIT, M.D., NEW YORK.

DR. HENRY STEWART HEWIT, who died in this city on the 19th ultimo, was the son of the Rev. Nathaniel Hewit, of Bridgeport, Conn., formerly of Fairfield, where Henry S. was born on the 26th of December, 1825. He was also grandson of the Hon. James Hillhouse, of New Haven. When seventeen years old he entered Yale College, but leaving before the completion of the course, commenced the study of medicine with Dr. Valentine Mott, of New York, and took his degree of Doctor in Medicine from the Medical Department of the University of New York in 1847. For about six months he served as *interne* in Bellevue Hospital, and in the following year (1848) entered the United States Army as Assistant Surgeon, and was ordered to Vera Cruz, remaining in that capacity there, and in California, until the termination of the war with Mexico, and for three years thereafter. In 1852 he settled in San Francisco, Cal., where he practised his profession until 1855, when he returned to this city.

At the outbreak of the war, in 1861, Dr. Hewit again entered the United States service as Brigade Surgeon, and from 1862 to 1864 was attached to the Staff of General Grant as Medical Director of the Department of West Tennessee and Mississippi. In 1863 he was taken prisoner, and was for one week in captivity in the Libby prison at Richmond, when he was exchanged and sent North in charge of sick and wounded prisoners, without parole.

In 1864 he took charge of No. 5 General Hospital, at Frederick, Md., where he remained until 1865. With the termination of the war he resigned his position and resumed practice in New York City. During the latter part of his service he was raised by *brevet* to the rank of Colonel.

When the Charity Hospital was reorganized in 1866, Dr. Hewit was among the newly appointed visiting physicians, and continued in the discharge of his duties until the occasion of his last visit, two days before his death.

In 1866 he resumed his charge as Visiting Physician to the House of the Good Shepherd, to which he had been appointed in 1856, and in 1867 he became Visiting Physician to the Home connected with St. Stephen's Roman Catholic Church. In 1872 he was appointed one of the Clinical Professors of Surgery in the Medical Department of the University of the City of New York, and at the time of his death was Vice-President of the Alumni Association of that school, Member of the Pathological Society, of the Academy of Medicine, of the Medical Library and Journal Association, and of the Physicians' Mutual Aid Association. He was also Consulting Surgeon to the Central Dispensary.

His death occurred very unexpectedly. At six o'clock P.M. of the 19th he was at the University. Returning home, he complained of feeling unwell, and immediately after dinner retired to his room and went to bed. Not long afterwards his stertorous breathing attracted the attention of the family, and without recovering consciousness he died at half-past eleven o'clock the same evening, of apoplexy.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from Aug. 19, 1873, *to Sept.* 4, 1873.

MAGRUDER, D. L., Surgeon, leave of absence extended 30 days. S. O. 171, A. G. O., Aug. 23, 1873.

WRIGHT, J. P., Surgeon, granted leave of absence for 30 days. S. O. 178, Dept. of Dakota, Aug. 13, 1873.

KNICKERBOCKER, B., Asst. Surgeon, leave of absence further extended 30 days. S. O. 173, A. G. O., Aug. 27, 1873.

NOTSON, WM. M., Asst. Surgeon, assigned to duty at Fort Gratiot, Mich. S. O. 106, Dept. of the Lakes, Aug. 26, 1873.

BROWN, HARVEY E., Asst. Surgeon, to proceed to Key West, Fla., and report to the Commanding Officer Dept. of the Gulf for assignment to duty. S. O. 170, A. G. O., Aug. 22, 1873.

KINSMAN, J. H., Asst. Surgeon, granted leave of absence for 60 days. S. O. 67, Mil. Division of the Missouri, Aug. 11, 1873.

CARVALLO, CARLOS, Asst. Surgeon, assigned to duty at Fort Mackinac, Mich. S. O. 106, C. S., Dept. of the Lakes.

KING, WM. H., Asst. Surgeon, assigned to duty at Newberry, S. C. S. O. 151, Dept. of the South, Aug. 25, 1873.

Medical Items and News.

A LIBERAL DONATION.—Mrs. Quincy Shaw, daughter of Professor Agassiz, has contributed one hundred thousand dollars to the Museum of Comparative Zoölogy, in which her father is so deeply interested.

ORDRONAUX.—John Ordronaux, M.D., LL.D., Professor of Medical Jurisprudence in the Law School of Columbia College, Boston University, etc., has been appointed Commissioner in Lunacy for the State of New York, in accordance with the provision of a recent law.

PROF. J. PANCOAST.—The Trustees of Jefferson Medical College having requested Prof. J. Pancoast to withdraw his resignation of the chair of anatomy in that institution, he has complied with the request, and will discharge the duties of the chair during the ensuing session.

THE ALUMNI ASSOCIATION of the Bellevue Hospital Medical College are to have their first dinner on the 30th of October next, at Delmonico's.

A TRIUMPH OF MORALITY.—Among the buildings destroyed by the fire in Boston of May last was "*Dr. Jourdain's Anatomical Museum*," one of the detestable exhibitions of casts and models which add their quota to the immorality of nearly all of our large cities. In view of the possibility of its renewal, the *Boston Society for Medical Observation* petitioned the Mayor that a license to exhibit another collection of the same sort be denied. A few days later a letter was received from the Mayor, which showed a most cordial approval of the action of the Society, and contained the assurance that such an application would be met by a prompt refusal. *The Clinic*, of Cincinnati, recommends that the medical societies of other cities should take similar action with regard to the like nuisances.

SURGEON GEN. JAMES C. PALMER, U.S.N., has been retired from active service, and Medical Director Joseph Beale, U.S.N., appointed in his stead.

DR. D. B. ST. JOHN ROOSA, of New York, has been elected President of the American Otological Society.

THE MEDICAL REGISTER FOR NEW YORK AND VICINITY, 1873–74, Dr. A. E. M. Purdy Editor, comes to us with the usual annual welcome. We have looked it over with care, and are enabled to say that it sustains its reputation for accuracy and usefulness. In addition to the material of former years, it contains a list of the medical, pharmaceutical, and dental institutions of the United States; also a list of the registered pharmacists and dentists. The obituaries are, as usual, carefully and discriminately written. A very commendable feature is the introduction of steel portraits of Drs. W. J. MacNevin and James L. Brown, to whose memory the work is tastefully and appropriately dedicated. The amount of practical information in this work renders it invaluable to any physician who wishes a medical guide-book of New York and vicinity.

RULES FOR FEEDING BABIES.—The following excellent rules, on the feeding of babies in general, are extracted from an essay recently read by Prof. A. Jacobi, M.D., of this city, before the Public Health Association. The rules in question were prepared especially as a guide to the public, and coming from such a source, are more than ordinarily valuable. We wish they could be placed in the hands of every mother and every nurse in the land. Embodying as they do the results of the experience of one of our highest authorities on the subject, they are also of particular value to the general medical practitioner. They are as follows:—

I. *Nursing Babies.*—Overfeeding does more harm than anything else. Nurse a baby of a month or two every two or three hours. Nurse a baby of six months and over, five times in twenty-four hours, and no more. When a baby gets thirsty in the meantime, give it a drink of water, or barley-water. *No sugar.* In hot weather—but in the hottest days only—mix a few drops of whiskey with either water or food, the whiskey not to exceed a teaspoonful in twenty-four hours.

II. *Feeding Babies.*—Boil a teaspoonful of powdered barley (grind it in a coffee grinder) and a gill of water, with a little salt, for fifteen minutes; strain it and mix it with half as much boiled milk, and a lump of white sugar. Give it lukewarm, through a nursing bottle. Keep bottle and mouth-piece in a bowl of water when not in use. Babies of five and six months, half barley-water and half boiled milk, with salt and white sugar. Older babies more milk in proportion. When babies are very costive, use oatmeal instead of barley. Cook and strain. When your breast-milk is half enough, change off between breast-milk and food. In hot summer weather try the food with a small strip of blue litmus-paper. If the blue paper turns red, either make a fresh mess or add a small pinch of baking soda to the food. Infants of six months may have beef-tea or beef-soup once a day, by itself, or mixed with other food. Babies of ten or twelve months may have a crust of bread and a piece of rare beef to suck. No child under two years ought to eat at your table. Give no candies, in fact nothing that is not contained in these rules, without a doctor's order.

III. *Summer Complaint.*—It comes from over feeding and hot and foul air; never from teething. Keep doors and windows open; wash your children with cold water at least twice a day, and oftener in the very hot season. When babies vomit and purge, give nothing to eat or drink for four or six hours, but all the fresh air you can. After that time you give a few drops of whiskey in a teaspoonful of ice-water every ten minutes, but not more until the doctor comes. When there is vomiting and purging, give no milk. Give no laudanum, no paregoric, no soothing syrup, no teas.

A TRAINING SCHOOL FOR NURSES is to be opened after November 1st, in connection with the Massachusetts General Hospital, and the future superintendent is visiting Bellevue Hospital in order to become familiar with the course of instruction already inaugurated in the latter institution. Thus far the school at Bellevue has fully answered all expectations.

THE MIDDLETOWN (N. Y.) PHYSICIANS have organized themselves into an association for the purpose of protection against "imposition by a class of people who never pay their physicians' bills, and without any other reason than to evade such payment, change from one physician to another and thereby escape." The secretary of the association is to keep each member informed of all persons who habitually refuse or neglect to pay their bills, and these will have to get along "without benefit of" doctor, or else pay "cash strictly in advance" for attendance.

THE SOCIAL EVIL IN ST. LOUIS.—A St. Louis judge has decided that the law "regulating" the social evil, and which virtually licenses houses of ill-fame, is unconstitutional, first, because it is a special statute, applicable to the City of St. Louis alone, while the State Constitution forbids special laws in cases where provision can be made by general laws; and second, because it is a special law in its application to but one sex, instead of to both sexes, which is contrary to the spirit of the Bill of Rights. The Judge certainly seems to give good reasons for his decision, considered from the standpoint of law alone.

DISRAELI has at last been installed as Rector of the University of Glasgow.

CALL FOR A MEETING OF THE SURGEONS OF THE CONFEDERATE ARMY DURING THE LATE WAR.—A circular addressed to the field and hospital surgeons of the late Confederate States, for a meeting to be held at Atlanta, Ga., on the 20th of May, 1874, has been published in Southern and Western journals, and signed by Dr. S. P. Moore, late Surgeon-General, and Drs. Lorrd, McGuire, Rice, Logan, Darby, and twenty other well-known Confederate surgeons; being based not alone upon the action of the Georgia Medical Association, but upon the earnest solicitations of many Confederate surgeons throughout the South. The object of the meeting is "for the advancement of science—to rescue from oblivion all the important medical and surgical facts developed within the armies of the Confederate States during the late war."

THE HAMPSHIRE MEDICAL COLLEGE has lately been able to complete its new and elegant hall, in great part through the liberality of a Mr. Stoughton of this city.

THE CHOLERA IN NASHVILLE.—Dr. W. K. Bowling, in a very able article in the *Nashville Jour. of Med. and Surg.*, remonstrates against the truth of the statements made by Dr. John C. Peters to the Board of Health of this city, regarding the outbreak of cholera in Nashville during July last, and shows as plainly as can be done by an analysis of individual cases, that, 1st, The disease was not contagious. 2d, That there is not the slightest evidence that it was introduced through any "initial case," and that Dr. Peters's statement that he had "positive information that cases were brought to Nashville, and died there," is a sheer fabrication. 3d, That as regards preferred spots and places, instead of being, as Dr. Peters stated, "almost exclusively confined to the outer limits and low portions of the city," and that it "carried off hundreds of those living near the small streams, or so-called branches, licks, and runs of water, especially Lick Branch, upon one side, and Wilson's Spring Branch upon the other," the disease was most prevalent in localities where the drainage was perfect and malarial influences absolutely *nil*. Dr. Bowling says: "We have shown that the terrific mortality in the hamlet of New Bethel, which carried off nearly half its inhabitants, occurred in a high and dry region, thoroughly drained, and no branch or run in a mile of it. Also on Rolling-Mill Hill, with no branch or run near it, except the Cumberland River, and that separated from the village by a bluff of rock two hundred feet high. . . . On these branches, and all the low grounds they and their tributaries drain, there were but sixty out of eight hundred deaths, seven hundred and forty being on high land." He further stigmatizes Dr. Peters's report as "a tissue of misrepresentations from beginning to end, which will figure in sanitary science hereafter and serve a purpose for ring-makers and job-hunters." The only "localizing causes" which Dr. Bowling deems of value are destitution and the use of vegetables, fruits, and such animal products as butter, cheese, milk, eggs, or honey.

THE *Clinic*, of Cincinnati, also says, regarding the cholera in that city: "The report with which Dr. Peters hastily rushed into the New York daily papers, has done him no credit. It is superficial and untruthful, and his predictions have all proven equally false."

PHILADELPHIA MEDICAL DIPLOMAS.—During the past four weeks five medical diplomas, issued by the American Institute of Philadelphia, have been taken to the Spanish Consul by Cubans for indorsement. The last one was issued September 1, to a Cuban who left Havana February 28, for Spain, and who arrived at New York June 9. It is alleged that they are bogus diplomas, having been purchased, the holders not having gone through a course of lectures. The Spanish Consul laid the matter before Mayor Stokley, and he will take action. All diplomas received by Spaniards or Cubans in this country must be indorsed by a resident Spanish Consul.

A STRIKE AMONG THE DOCTORS.—A melancholy illustration of the social status of physicians has occurred in Aargu, Switzerland, where a regular strike has been entered into by a formal resolution to the effect that the physicians will suspend all visits to the sick poor of the city until a decent remuneration is furnished by the civil authorities. The same rules exist in this regard as prevailed in 1804. While everything else has changed so many times, the fee for visits to the sick poor has remained the same. The scale is arranged so that a physician who visits a patient three-quarters of an hour distant receives from the city authorities the miserable pittance of 70 centimes (35 cts.). A common message carrier receives for the same labor, one franc, *i.e.*, 30 centimes more.—*Allg. Wien. Med. Zeit.*, July 29, 1873.

UNIVERSITY OF PENNSYLVANIA.—Until the new college building and hospital on the west side of the Schuylkill are ready for occupancy, the Medical Department of the University of Pennsylvania have secured possession of the old Pennsylvania College building, where lectures will be given next winter.

DR. EDWARD WARREN, late professor in the Baltimore College of Physicians and Surgeons, has recently been appointed by the Khédive of Egypt to the position of staff-surgeon in his army, with the rank of colonel, and with the privilege of practising medicine and surgery in the city of Cairo. Dr. Warren is the author of the famous repartee to the Attorney-General, in the Wharton case, that "lawyers' mistakes sometimes hang six feet in the air."

DR. LYMAN CONGDON, of Syracuse, formerly superintendent of the Willard Asylum, has been appointed superintendent of the Inebriate Asylum at Binghamton, vice Dr. Dodge, resigned.

THE MAINE MEDICAL SCHOOL.—The Overseers and Trustees of Bowdoin College have made the following elections for the Medical School of Maine: Dr. E. W. Jenks, Professor of Diseases of Women; Dr. Alfred Mitchell, Professor of Obstetrics and Diseases of Children; Dr. Robert Amory, Professor of Physiology; Dr. T. H. Gerrish, Professor of Materia Medica.

A REAL LOVER OF HIS RACE, in view of the approaching era of political speech-making, advertises for some secret and expeditious method of communicating lockjaw.

THE NEW HOSPITAL BUILDING IN NEW HAVEN, erected during the past year, is situated on the grounds of the General Hospital Society, and connected by a corridor with the old hospital building. It is considered a model hospital building, and consists of a centre building, with two wings, all three stories above the basement, with a frontage of 263 feet. The centre building is 50 by 64 feet, the west wing 29 by 87 feet, the east wing 29 by 112 feet, with a capacity for 114 beds, besides several large rooms for the accommodation of special patients. Unusual attention has been given to both heating and ventilation, also to all other matters of detail, such as bath-tubs, wash-basins, water-closets, gas, medicine, and linen-closets. The entire cost, when completed, will be about $84,000, which has been defrayed by the subscriptions of benevolent persons.

Medical Department of Life Insurance.

THE LAWS OF TRANSMISSION OF RESEMBLANCE FROM PARENTS TO THEIR CHILDREN.

By JOHN STOCKTON-HOUGH, M.D.,

OF PHILADELPHIA.

PART II.

WHY CHILDREN RESEMBLE THEIR MOTHERS MORE THAN THEIR FATHERS.

BUFFON says: "The molecules furnished by the father ought to procure his resemblance, if they are more abundant than those of the mother, and when the father furnishes less it leaves the infant more of the resemblance of the mother, which latter occurs very frequently."

Darwin has progressed but little further, where he suggests that the resemblance of offspring to one parent in one part, and the other in another part, is not difficult to understand on the admission that the gemmules in the fertilized germ are superabundant in number, and that those derived from one parent have some advantage in number, affinity, or vigor over those derived from the other parent."*

These explanations are scarcely more definite, and little different from the ancient opinions on the same subject, a sample of which we give from Lactantius: † Similitudines autem in corporibus filiorum sic fieri putant. [Varro scilicet et Aristoteles] cum semina inter se permixta coalescunt, si virile superaverit, patri similem provenire, seu marem seu fœminam. Si muliebre prævaluerit, progeniem respondere maternam. ‡

"Even in hybrid plants, Kœlreuter says he has produced or diminished paternal resemblance by increasing the quantity of impregnating dust," while Mr. Knight says: "Except in cases where superfœtation took place, I have invariably found the effect of a very large or a very small quantity of pollen to be invariably the same in its influence on the offspring." §

It is well enough to observe here that the discrepancy between these observers may very possibly be due to the time or *degree of maturation of the ovules*, when the pollen was applied.

It is quite possible that great inequality in the ages of the parents may have some effect in determining the resemblance to either parent, as some authors attribute defects in children to this cause, and Hoffacker and Saddler have shown that the proportion of sexes born to such parents differs very considerably from that among couples of nearly the same ages.

Helvetius, Weikard, and others, thought that the resemblance of children to their parents depended less upon hereditary transmission than upon education, imitation, and other analogous exterior circumstances. Burdach* very properly remarks, that "with the excellent intention of raising a man, which is free to all who desire to make use of that liberty, it is too far from the truth to hazard that hypothesis; for hereditary qualities have really more control over our constitution and our character than all the influences from without, physical and moral. As the children of a marriage often differ altogether the one from the others, in regard to constitution, inclinations, and propensities, although having all been raised under circumstances equally good," etc.

Congenital conditions are not the only ones which are subject to hereditary transmission; the same thing happens equally to those which are accidentally acquired or have been subject to the will. It is not rare to see mastiffs,† dogs, and cats, born with a short tail resembling the acquired malformation in their parents.‡

It seems, therefore, from all the authorities cited, to be pretty generally believed that mothers impress their children, of both sexes, with their physical and moral peculiarities, their constitutional tendencies and hereditary diseases and defects; in short, a general resemblance more marked than that derived from their fathers; and it is not at all surprising that this should be so, for the child is for a considerable period, amounting to at least two years, under the exclusive control and influence of the mother and her varying physical condition during this time.

In the first place, it may be well to inquire, when and where either parent begins to impress the product with a resemblance to themselves. For convenience, we may divide the time and place of impression into four parts, viz.: 1. Impression on either element before fecundation. 2. Impression from the instant of fecundation until the product leaves the Graafian follicle. 3. During gestation. 4. During lactation. At each one of these periods the ovum or product of conception usually receives impressions, but most in the second, or indeed principally there, as some authors have it, for they say that both resemblance and hereditary disease are communicated during this period. Constitutional diseases and peculiarities are probably communicated during this time, though the period of gestation must be reckoned to have great influence on the tastes, inclinations, and *qualités* of the physical and mental faculties.

It is quite probable that the ova of the female have an initial existence, as primordial cells or germs, at a very early period in the life of the child, and are in some degree capable of receiving and retaining impressions which may influence the products derived from them.

On the other hand, the spermatozoa are probably not in a condition, (if indeed they have an existence,) much before puberty to receive or retain the result of impressions made upon the man. So then, before impregnation, the female element has, in all probability, been subjected to the varying physical conditions of the woman for a much greater length of time than the male element has been to the varying physical states of the man; and the former is, moreover, much more susceptible to such impressions than the latter. Some may think that the ova are not susceptible of being influenced by such methods as I have suggested; to

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* Animals and Plants under Domest., vol. ii., p. 286.

† De Opificio Dei, cap. 12. Compare also Lucretius, De Rerum Natura, B. iv.

‡ Dr. Allen, of Lowell, Massachusetts, very properly calls attention to the great want of rules whereby we may judge of resemblance and constitutional predisposition. He says: It is true that the general fact of resemblance of children to parents has long been admitted; but then we have no guide or rules whereby every feature and shade of this likeness can be traced out between the offspring and the parent, or dissimilarity accounted for. While in books and journals there are many admissions that there is, and must be, much truth in this law of resemblance, you may search medical and other libraries through and through without finding a single treatise or scarcely an essay that discusses this topic in an intelligible manner. But it is an encouraging fact that the most progressive men in the medical profession, both in Great Britain and in our own country, are waking up to the truth and importance of this subject, especially as it is manifested in the transmission of disease. A careful inquiry into the diseases of a person's parents and ancestors enables one to understand more distinctly what are his predispositions to particular diseases, and what are constitutional and what are not.—Nathan Allen, M.D., LL.D., "Hereditary Influence in the Improvement of Stock," &c. 1872, pp 30, p. 10.

§ Thomas Andrew Knight, Philos. Trans., 1809, p. 394. "Influence of Male and Female Parents on their Offspring."

* Physiologie, v. ii., p. 248.

† Der Naturforscher, t. xv., p. 25.

‡ Burdach, Physiol., v. ii., p. 251.

these I can only point to the great difference in appearance, constitution, viability, tastes and inclinations of children by the same parents, while twins are proverbially alike in some one if not all these particulars.

Dr. Martin Barry, in his observations on the "*direction*" of development as influencing the "*individual* peculiarities of structure," says: "Strictly speaking, therefore, no two individuals of different births can have the same parentage; for though the *individuality* of the parent, or of each parent, does not change, yet as *individuals*, the parents are continually changing.

"The more nearly *contemporaneous* separation of their elements, and the contemporaneous derivation of nourishment from the maternal fluids, during fœtal life—but especially the former—are perhaps the causes why twins are sometimes so much alike in individual structure; and *super*-fœtation may be, in part at least, the cause why this is not always the case.

"There is, however, another cause why individuals, even of the same birth, should differ, viz.: the different periods, at which the maternal portion of the germs may have been first secreted in the ovary; for, though continually renewed, they must have in consequence a more or less peculiar state of being."* This point is well illustrated in the frequency of differences in color, constitution, etc., in the young of the same birth in multiparous animals.

We conclude, therefore, that there are few, if any, physical, moral or mental acts of a woman's life that are not without some influence, however inappreciable, on every child which she may subsequently bear. And every *succeeding* child is influenced by the impressions left on the maternal organism by each and every *preceding* child, though they may all have been of the same father, and this influence is increased with the number of fathers. This brings us to the subject of resemblance of a child by a second husband to the first, which is not within the limits of the subject under discussion.

After or at the time of impregnation, the father begins to exert a combined influence with the mother, though this influence is much less considerable than that of the female, for in addition to the influence exerted before impregnation, she has begun a new process which only ceases at the completion of the term of gestation. During lactation, the child is impressed in some degree, however slight, by the varying conditions of the mother. Through this source it may imbibe each vices, diseases, tastes, and inclinations. Indeed, some writers have made this an argument against the use of the milk of the lower animals, lest the child should be brutalized by such food. Tupper† contends that children are even educated in their mother's milk. Every child a woman bears inoculates, so to speak, her constitution with some of the peculiarities of the father of the product, and, other things being equal, it is probable that the greater the number of children the greater will be the impression made upon her system by the husband, until she will finally come to resemble‡ him in some degree at least. This influence is probably greater in the cases of gestations with daughters than with sons, for three reasons, viz.: 1. The father's influence begins earlier in the case of female conceptions, as the ovum is fecundated at an earlier period of development. 2. Female fœtuses sap the vitality of the mother more than males. 3. Daughters resemble the father more than sons. From these reasons, then, it is only fair to infer that a woman who had borne a certain number of daughters ought to resemble their father more than after bearing the same number of sons. The husband will therefore lose a part of his individuality, or rather his wife will have acquired a share of it. If this be true, the younger children ought to resemble the father more than the elder, and, if the mother's system can be inoculated with his defects and diseases, even though they be constitutional, as is certainly the case in syphilis, it is only fair to infer that the younger children would be more likely to inherit a predisposition to these affections than the elder,* and consequently have relatively a lower viability.

This fact of a woman acquiring a resemblance to her husband might be used as an argument against the propriety of a widow marrying her deceased husband's brother, though it would not materially affect the propriety of a widower marrying his deceased wife's sister

It is well known also that women sometimes become masculine, and females of the lower animals take on secondary sexual characters of the male, though the reverse seldom, if ever, happens.

I am told that Mr. Tylor† has ingeniously explained some apparent anomalies in the prohibition of consanguineous marriages not extending equally to the relatives on both the male and female sides. Though I have not seen this work, I imagine it refers to the matter just mentioned.

Mr. Clark, a breeder of fighting cocks, "found, after repeated trials, that there was a greater reduction of weight in the young from a father paired with his daughter, than from a mother with her son."‡ From this it would appear that there is a greater resemblance between the father and daughter than between the mother and son.

Gaertner§ repeatedly found that when a hybrid was used as the father, and either one of the pure parent-species or a third species was used as the mother, the offspring were more variable than when the same hybrid was used as the mother and either pure parent or the same third species as the father.

Sedgwick, after referring to the transmission of hypospadias by females, is of the opinion that "it cannot at present be satisfactorily decided whether such interruptions in the transmission of peculiarities thus necessarily limited to the male sex are equally liable to occur in those peculiar to females by transmission through males. It is well known that the power of giving a copious supply of milk may be transmitted by the bull as well as by the cow; but my observations on this subject lead me to infer that, in all cases of interrupted descent in hereditary disease, the transmission by females is more common than by males, and that as regards the class now under consideration, it may be asserted, in general terms, that whilst there is little difficulty on the part of females to transmit diseases and defects of exclusively male organs, there are very few, or rather scarcely any, corresponding cases in which the reverse occurs."‖

* On Unity of Structure in the Animal Kingdom, in Edinb. New Philos. Jour., 1857, vol. xxii., p. 138.

† Proverbial Philosophy.

‡ Yet in the long years liker must they grow;
The man be more of woman, she of man:
. . . . . .
Till at the last she set herself to man
Like perfect music unto noble words;
. . . . . .
Distinct in individualities,
But like each other, even as those who love.
—Tennyson's Princess.

* The relative viability of younger and elder children will be fully discussed in a forthcoming paper on the "Physical Aspects of Primogeniture."

† Early History of Man, Lond., 1865, ch. x.

‡ Darwin, Var. Anim. and Plants under Domest., vol. ii., p. 125.

§ Bastarderzeugung, S. 452, 507.

‖ Op. Cit. p. 172. July, 1863.

ATAVISM.

Atavism, from *atavus*, an ancestor, is a term applied to the resemblance of a child to the grandparents or more remote ancestors, rather than to its own parents. Rückschlag in German, Pas-en-arrière in French, and Reversion in English, are synonymous terms.

Atavism is a word, like Idiosyncrasy or Catalysis, with a conventional meaning, expressive of a condition, without embodying in any degree an explanation of the cause. Indeed, no explanation of the proximate cause has ever been given, to my knowledge, though evolutionists have been satisfied in ascribing atavism to "*reversion*," which, though new, is scarcely an improvement on the ancient term, as it only means a turning back to an original condition, which would seem to indicate a deterioration or inferior degree of development, an inference manifestly incorrect.

The true cause of atavism is a *dynamic* one, just as I shall show, in a succeeding article, that "the cause of the rotation of, and nearly equal number of, sexes in births" is a dynamic one, the fœtus *in utero* impressing the mother in a *greater* and *lesser degree alternately*,—one sapping the vitality of the mother in a greater degree, and the next succeeding one in a lesser degree. I cannot stop now to discuss this theory further, but must refer the reader to the article above mentioned.

Atavism, however, is usually subject to *sexual differentiation*, which fully confirms the view I have given of the proximate cause. This will be explained further on.

Atavism, then, is due to the dynamic force in one generation exhausting itself in the next, then regaining, then losing, in a series of alternations. This dynamic difference in the resultant, so to speak, of the elements uniting to form a new being, finds an explanation in the different states or conditions of development, or degrees of maturity of the ovum at the time of fecundation (the variations in the law are explained by differences in nutrition before and after fecundation).

Darwin * says: "When one parent alone displays some newly acquired and generally inheritable character, and the offspring do not inherit it, the cause may lie in the other parent having the power of prepotent transmission. But when both parents are similarly characterized, and the child does not, whatever the cause may be, inherit the character in question, but resembles its grandparents, we have one of the simplest cases of reversion. We continually see another and even more simple case of atavism, though not generally included under this head, namely, when the son more closely resembles his maternal than his paternal grandsire in some male attribute, as in peculiarity in the beard of man, the horns of the bull, the hackles or comb of the cock, or as in certain diseases necessarily confined to the male sex; for the mother cannot possess or exhibit such male attributes, yet the child has inherited them, through her blood, from his maternal grandsire."

"Atavism, or the principle of latent inheritance, is a normal phenomenon in certain forms of disease, as in color-blindness and the hemorrhagic diathesis, in which it is associated with sexual limitation, and pursues for the most part a very regular course. It is well known that in these two forms of disease the order observed, both in their development and transmission, is usually complete, so that whilst the disease in each case shows itself only in the males of the first, third, and fifth generations, its transmission is effected only by the females of the second and fourth generations; and as this occurred also in my case of ichthyosis and in other diseases already noticed, the question naturally presents itself whether in those cases in which two or more members of the same family are affected, without any evidence of the occurrence of the same disease in preceding generations, it may, notwithstanding, have occurred without being recorded."*

Sedgwick states, in opposition somewhat to M. Girou's † opinion on this subject, "that although the principle of atavism is intimately associated with that of sexual limitation, both in natural as well as in morbid development, yet it is far more common in the latter than in the former state." ‡

"M. Girou endeavored to show that children naturally resembled their grandparents of the same sex, and that the transmission of this family likeness was effected through parents of the opposite sex. It is, however, quite evident that although such atavic resemblances may often be noticed, yet contrary facts can be so readily adduced as to disprove the general application of the above principle in the normal development of the human race." . . In connection also with this subject, it may be observed that in the offspring of dissimilar parents there is never, as a rule, complete fusion of the two parents, but a distribution of the characters peculiar to each; and although this is less strongly marked in the offspring of the human race than it is in that of the lower animals—as, for example, in the case of some hermaphrodite insects, in which family quarterings may result from specific distinctions of sex being associated without fusion in the same specimen—yet, as regards the inheritance of disease, it will be found that the morbid characteristics of one or the other parent are either completely repeated or completely absent, but not fused together in the offspring. This is what is meant in inheritance by the doctrine of 'election,' which is based on the observation that certain attributes of organization peculiar to one parent are repeated in the offspring; and it offers a reasonable explanation of the fact that children often inherit the defects of one parent, whilst in many other respects they resemble the other; and the inheritance in these cases, both natural and morbid, may sometimes be conveyed to them by atavic descent." (Sedgwick.)

Mr. Westwood observed in a specimen of the scare egger moth at Berlin, that the front part of the body and front wings were half male and half female, and the hind part and hind wings half female and half male; the characters of the male and female insect being exhibited on opposite quarters of this specimen.

Indeed the exhibition of secondary sexual characters or peculiarities belonging to the opposite sex to that of their possessor, in animals naturally dioecious, is not without example even in the human race. We see women with beard, and men without; so also there are masculine women, possessing other peculiarities of the male, and effeminate men possessing characteristics of the female. Even where there is no apparent mixture of physical characters of one sex in an individual of the opposite sex, the mind of some men is effeminate, while that of some women is masculine.

Hence the following epigram of Martial:

> But while thy limbs we rough and bristly find,
> Effeminate and wanton is thy mind.
> —Lib. ii., Epigr. 36.

Also:

> Dum dubitat natura gravis puerum faceretne puellam,
> Factus es O pulcher pene puella puer.
> Ausonius,—Epigram 107.

* Animals and Plants under Domestication, vol. ii., p. 29.

* Sedgwick, op. cit., July, 1863, p. 186.
† De la Génération, Paris, 1828.
‡ Op. cit., July, 1863, p. 190.

Cases are not wanting in which one half of the body resembled one parent and the other half the other parent. Sibley relates the case of a young girl in Somersetshire, with hair on her head of two remarkably distinct colors; the right side from an exact parallel line which divided the skull into two equal parts was almost black; but the left side, from the same line, was of a reddish yellow. As she grew up the dark hair became jet black, exactly like that of her father; while the other side became of a strong carroty red, precisely like that of her mother. The hair on all other parts of her body was diversified in the same manner. She lived to be 28 years of age, and was resorted to as a great curiosity.

Another case is recorded by the same author where the son of a white father and a negro-mother had the whole of the right side white like the father, and that of the left black like the mother. Half the hair on the head was long and brown like the father, and the other half black and woolly like the mother.

A third case is given, where a negro-man married a white woman. By her he had two sons and three daughters, who were mulattos, except the eldest son, who was the first-born. From the head to the navel, all around his body he was remarkably fair, had a fine skin, handsome round features, light-brown hair, and sanguine complexion, like his mother; but below this he was completely black, with short woolly hair, exactly like the father.*

Buffon declares that the offspring of a black man and a white woman are often pied or spotted. I remember having seen a black woman having large white patches on different parts of the body. Though I have several times seen the offspring of a white woman and colored man, and less frequently the reverse, they presented nothing unusual.

Prof. Asa Gray † described an apple half russet and half Spitzenberg, the line of demarcation being quite distinct. Apples have also been found with one half sweet and the other half sour. This is the more remarkable from the fact that apples have five carpels, from which we would expect the divisions to be in fifths rather than halves.

Sedgwick says: It appears to be the rule in reproduction, that the lower the position of the organized beings the more constant is the occurrence of the principle of atavic or uninterrupted inheritance, this associated principle of sexual limitation being gradually merged into that of alternation of form. So that whilst in the higher invertebratæ there are alternations between the sexual and the virgin forms of reproduction, and in many of the lower invertebratæ between the hermaphrodite and the gemmiparous, in the corresponding alternations which occur in some of the lowest conditions of animal life, the sexual element, if not altogether lost, exists in too rudimentary a form for us to recognize its presence.

"It may also be remarked, that although the occurrence of atavism in disease is usually effected through the female, yet it occurs also, though less frequently, through the male sex. Illustrations of this are given in many cases of disease already cited, and among the lower animals it may often be noticed as a natural phenomenon. It is well known, for example, that the supply of milk by cows is hereditarily influenced by the bulls rather than by the cows from which they are directly descended, and that the character of the secretion, as regards both the quantity and the quality of the milk, is chiefly derived from the paternal grandmother by atavic descent,* and as we descend still lower in the scale, we find, for example, in the case of insects, evidence more or less decisive in favor of the transmission by either sex of the distinctive peculiarities of the other."

From all that has been brought forward concerning atavism or interrupted descent, it would appear as if it were quite as important, in getting the family history of an individual with a view of predicting his longevity, to inquire into the history of his grandparents, as well as that of his parents. Indeed, according to the showing of some authors cited, the facts concerning the grandparents would be much more important than those concerning the parents; yet in my experience I have not known such facts to be required by life companies, though I have often given them.

(To be continued.)

* Medical Mirror, London, 8vo, p. 95.

† American Journal of Science and Arts, Dec. 1872.

MEDICAL EXAMINATIONS.†

THE subject of Medical Examinations for Life Insurance has given rise to such frequent and voluminous discussion in the insurance publications, by their editors, by the General Agents and Solicitors, and occasionally by the Doctors themselves, that the topic has well-nigh become a threadbare one; yet it may be fairly doubted if any of the numerous writers, who have felt competent to deal with the question, have had anything more than confused impressions as to its importance, and a striking lack of practical knowledge of the matter in its relations to the business of life insurance as at present conducted by the companies—nor does the writer of the present article claim any special fitness for the task, further than may naturally have fallen to him in the course of some years' acquaintance with insurance companies and their agents and medical examiners, and an earnest desire to further in his feeble way the correction of abuses which he conceives to exist—abuses which are fraught with evil for the companies, the agents, and the doctors. . . . . The mistakes in the selection of medical examiners, commence, it is fair to assume, with the companies themselves, in a too loose administration of their medical affairs at the head offices, and in too great latitude of judgment given their general agents. That many of the companies manage loosely and carelessly their medical affairs, may be seen by reference to the official reports for the last few years. A striking difference in the ratios of mortality will not fail to strike even a casual observer. That this inequality is due in great measure, if not altogether, to different degrees of care and competence in the choice of risks, is an inference to be correctly drawn; and the conclusion is inevitable that all companies are not equally judicious and skilful, though they all equally claim to be. Some special facts bearing upon this point, within the personal knowledge of the writer, it would not, under the circumstances, be proper to state; it is otherwise, however, with regard to the second proposition—that too great extent of judgment is allowed to general agents upon matters purely medical, about which they comprehend little or nothing.

* Burdach, Traité de Physiologie, tom. ii. p. 117, and Giron, De la Génération, p. 127. Out of Sedgwick, op. cit., p. 191-2; also Thierry.

† The original article, of which this is a pretty full extract, will be found in the May and June numbers of the *Coast Review*, a vigorous journal published monthly in San Francisco, California. The writer is evidently well acquainted with the evils of which he speaks, and does not hesitate to lay the blame upon those who deserve it. His statements concerning the proportion of unfit medical examiners are, we think, altogether too strong, at least so far as the Eastern and Middle States are concerned. We have no knowledge of the fitness or unfitness of medical examiners in California, but presume that the proportion of good physicians is as large there as elsewhere.—EDITOR.

A general agent of one of the largest Eastern companies was asked by the resident medical officer of another Eastern company for certain information as to the qualifications and standing of a gentleman who had been employed as physician by the former—and, in substance, this is the answer received: "Well, he's a pretty good kind of a fellow—I've known him a long time—I do not really think he is much of a doctor, but I reckon he is *good enough to make medical examinations. I* accept his work *myself*." And this is a fair example of the ignorance and self-sufficiency pervading the mind of the average general agent upon this important subject. A man may not be a very good doctor, yet he is capable of making a sufficiently thorough and intelligent examination for life insurance! So far is this from the truth, that it should be one of the first things impressed upon those who make choice of the medical officers for a company, that *it requires a physician of greater skill, of better judgment, of higher integrity, to make a thorough, honest, and efficient examination of a man who declares himself to be in perfect health*—as is the case with all applicants for insurance—*than to diagnosticate disease in one who states himself to be sick, or prescribe remedies for his ailment.*

Another general agent of a pre-eminently "conservative" company is at great pains and expense of words in *instructing* his examiners in the rules and regulations of his employers bearing upon certain hereditary diseases—*as interpreted by himself*—and this same general agent, in filling out an application, proposes to suppress a statement, made by the applicant, of the existence of consumption in a collateral branch of his family, as being entirely irrelevant to the case in hand, and calculated to produce an "unnecessary prejudice" at the home office.

Taking solicitors for insurance as a class, there can be no manner of doubt that the medical man is selected by them solely on account of his "social qualities," of the assistance expected to be obtained from him, of his extensive acquaintance and generally "accommodating" disposition, and not because of his down-right ability to serve the company employing him. Indeed, were the desire ever so strong to employ physicians for their capability and integrity alone, the average solicitor is not a man able to make the discrimination.

In what has been written here we are aware that strong language has been made use of. We have not hesitated to call a spade a spade, when we have felt assured we were right. The truth of this matter of the abuses to which the customary mode of choosing medical examiners is subject, has been long enough hid in a well, and the evils inevitably growing out of it have been too industriously kept out of sight. We do not expect any one of the general agents to believe what we have said, and we are sorry for it.

> "No rogue e'er felt the halter draw,
> With good opinion of the law."

Something further remains to be said of the medical examiners themselves—something to be said plainly—it is to be hoped not unpleasantly.

We deem it well to apologize in advance to those of our medical examiners (and there are many of them), who sincerely feel the responsibility of their position, and endeavor to discharge their duties with scrupulous fairness to the companies. These gentlemen we hold in the highest respect.

There is a class of men, though, who write themselves doctors, through having, like Molière's *Malade Imaginaire*, fitted themselves out with a melancholy cap and robe, and committed to memory a few set phrases of macaronic Latin, in whose hands a large share of medical examinations is habitually placed—Dulcamaras, Sangrados, Slops, hangers-on of insurance offices—whom, without knowing exactly why, we cannot help regarding with a curious mixture of sorrow and contempt.

There is another, and yet a larger, class of medical examiners whose chief fault lies in their extreme carelessness. To the first of these three classes we are not now addressing ourselves. To the other two, whatever criticism of medical examiners follows here is intended to apply.

It was assumed before that the prevailing mode of choosing medical examiners, in placing too much power in the hands of agents, is the cause of much of the increased mortality of the companies—that a large share of this mortality might have been avoided, had greater care and more intelligent methods obtained in the selection of risks,—and we have not thought any elaborate discourse necessary in support of our assumption.* The thing is too obvious, and the facts too easy of access. We shall astonish some of our friends when we say that we do not believe that one medical examiner out of four appreciates the responsibility of his position; that not one out of four but enters upon his examination with a tacit prejudice in favor of the agent and the applicant, and that not two out of the four will be able to entirely overcome this prejudice when the certificate comes to be filled up. This is a sweeping statement, but we believe it is within the truth. Look now, for a moment, at the position of the medical examiner, as we conceive him to exist. *Item:* he is appointed by the agent. *Item:* appointed by the agent in the interest of the agent. *Item:* he is, probably, the friend or acquaintance of the party to be examined. *Item:* the party to be examined may require, at some future time, the services of a physician. *Item:* therefore not to be offended. *Item:* this agent will doubtless have other applicants to be examined. *Item:* therefore on no account to be offended. *Item:* the company is large and prosperous. If this man die, the loss, being distributed among so many policyholders, will be inappreciable. *Item:* he is poor, and if he die uninsured, his family will be left unprovided for. *Item:* if we err at all, let it be on the side of charity. And, after the examination is over, let us add, finally, *Item:* this is a first-class risk . . . . . Do you say that such reasoning as this is mere nonsense, that, in a few exceptional cases, such considerations as we have supposed may have some weight with the medical man, but they are of only very unfrequent application?

Tell us, then, how you will account for occurrences like the following: A medical man who stands at the very head of his profession in the region in which he lives, a graduate of one of the first medical schools in the country, and who is employed by the most careful companies—a man fond of boasting of his skill and sagacity—examines, and accepts unqualifiedly, for a $10,000 policy, an applicant well-known to him, and with whom he is in daily intercourse, who bears the reputation of being a confirmed drunkard.

In conclusion, we wish to offer only this suggestion of obvious import: that the *entire control* of a company's medical affairs be left with medical men of known integrity, who shall be made to feel themselves, in their standing at the home office, wholly independent of agency influences—as the first and most essential step in any amelioration of existing evils.

* The mortality of the fifty-five companies doing business in the State of New York shows an increase for 1872 over 1871, of almost twenty per cent.—a rate altogether out of proportion to the rise of mortality naturally due to advanced age of the risks.

ON THE QUESTION OF SENDING MEDICAL EXAMINERS' REPORTS DIRECTLY TO THE HOME OFFICE.

BY A MEDICAL DIRECTOR.

Among all the life companies, excepting one, it is customary for the medical examiner to make out his report on the back of the application, and then to entrust it to the agent for transmission to the home office. This practice, it appears, meets with universal condemnation on the part of all medical examiners outside of the larger cities.

In a previous article, without having given much thought to the subject, we expressed the belief that the proposed plan of sending the physician's report directly to the home office, separate from the application, would not obviate the difficulties and temptations complained of. After reading, however, the communications published in the last two numbers of the insurance department of this journal, we do not hesitate to say that we now entertain a different view in regard to this question, and are disposed, with the writers referred to, to advocate the plan of separate medical reports. These examiners understand thoroughly the working of the present method by actual experience, and their views are therefore entitled to greater weight than those of any person who simply considers the question in the abstract. They urge the change on the following grounds:

First, because it enables the examiner to give the company an unbiased estimate of the risk, without subjecting himself to the ill-will of the applicant.

Where the examiner entertains doubts whether or not he should recommend the applicant, who is perhaps at the same time his patient or a personal friend, it will undoubtedly strengthen his hesitating loyalty to the company to have this opportunity of making a confidential report. The presence of the applicant, and often also of the agent, not unfrequently obscures the judgment of the examiner, who, if left to himself for a moment and allowed to decide by confidential letter to the home office, would give the company the full benefit of any doubts that might beset his mind.

The second reason urged in its favor is that it renders it impossible for the agent or any other interested person to tamper with the physician's report.

We can readily conceive that agents might be found who would do such a thing, and yet we have never heard of a single instance where the physician's *no* was changed to a *yes*. A slight change like this, however, is all that is needed in those instances where the physician simply declines to recommend the risk without stating, in his preceding answers, anything sufficiently grave to contradict the final approving *yes*. In the ordinary course of things, the physician never sees his certificate again after it has once passed out of his hands, and yet he is the only person capable of detecting a fraud of this nature.

It is apparent, therefore, that the companies incur a very great danger in continuing the present practice of allowing the agents to receive and transmit the examiner's report to the home office.

The next most important question is, What are the objections to the carrying out of the plan advocated? The increased expense can hardly be brought forward as a serious objection, for it surely would not exceed $100 per thousand applications—a trifling sum to pay for the greater protection against fraud.

Another objection to the plan would be the vexatious delays caused in the issue of the policy, owing to the tardiness of the doctors in sending on their reports to the home office. We admit that in all matters of correspondence country physicians, as a class, are *apparently* dilatory. Ample excuse, however, may be found for this in the nature of a country practice, which leaves no time for letter-writing. But the case here is different, for the examination once made and the applicant out of the way, the physician has simply to add his recommendation or rejection of the risk, and place the report in an envelope ready for mailing. This is a much simpler matter than writing a letter, and differs from the method now followed only in the fact that the examiner must himself place the report in the mail, and not deliver it unsealed to the agent for that purpose. We do not believe, however, that, in the carrying out of the plan, this objection would prove a serious obstacle in the way. The chief trouble to be anticipated would come from the agents, who would be quick to see in this method the death-blow to one of their favorite practices. We refer to the custom of taking a rejected applicant from one physician to another, until he finally passes a favorable examination. The applicant at the same time is told that the refusal of one physician to recommend the risk is not to be considered as a rejection, unless the company has formally refused to write a policy upon his life. By this stretch of conscience the applicant is enabled to write out a clean application, and the agent in this way secures his prize. The proposed change would in a great measure put an end to this unscrupulous practice, and hence the opposition to be expected from those who depend upon it for at least a part of their fees.

A few companies have had the independence to take the appointment of medical examiners entirely out of the hands of their agents. In doing so they met with decided opposition on the part of many of these men, but we believe that we state the truth in saying that not one of these companies would now return to the old method, so confident are they of the greater safety of the new. For these companies a change like the one here advocated would be a comparatively easy matter, and would probably meet with but little opposition. The other companies, however, being still to a great extent at the mercy of their agents, would find that the change involved serious difficulties.

A FEW REMARKS ON THE APPOINTMENT OF MEDICAL OFFICERS TO LIFE-INSURANCE COMPANIES.

BY A CANADIAN EXAMINER.

The devotion of a certain space in the Record to the discussion of subjects relating to the Medical Department of Life Insurance will certainly prove a valuable and much needed addition to periodical medical literature, and it is to be hoped that examiners throughout the country will avail themselves of this means for the exchange of opinion and the free discussion of questions bearing on their special duties and responsibilities. Medical officers are, it is supposed, the confidential advisers of the companies whose fees they receive; they are expected, in the words of a recent communication by a secretary, to "resolutely stand like an alert and faithful sentinel between the company on the one hand, and the unsafe and undesirable risk seeking admission thereto on the other." * We are told that "upon his skill and fidelity and independence depend largely the prosperity and even safety

* Quoted by Secretary from Prof. J. Adams Allen's work on "Medical Examinations for Life Insurance."—Editor.

of the company for which he acts." Admitting that these quotations describe correctly the relation which ought to exist between the company and its physician, does the company use the most reliable means at its command to secure in its examiner skill, diligence, truthfulness, and independence?

In ordinary business transactions it is the almost invariable rule that persons entrusted with extremely important duties, involving large sums of money, are required to furnish bonds that their contract shall be fairly carried out, and although this rule cannot be applied in the case under consideration, it points to the necessity of exercising great vigilance and caution. The examiner should be selected by the representatives of the company at its head office, on the recommendation of a competent and duly authorized medical man or Board, and not, as is too frequently the case, either directly or indirectly by outside agents. Agents acquire their incomes from premiums actually paid, and every applicant rejected by the medical examiner deprives them of a certain sum of money. It is natural to suppose—at any rate experience has taught us, especially where the cause of rejection is not satisfactory to the agent—that the greater number of agents resent this; that they feel aggrieved; and although it may not be in their power formally to remove the examiner, they often manage gradually to displace him by one more pliant or ignorant, or with more sympathy for his employer than for the company. Companies generally, in disputes between the agent and examiner, quietly sustain the former in preference. Competition runs high, and good canvassers seem to be of more value than reliable examiners. It must be a source of satisfaction to the profession to know that there are comparatively few of its members open to the charge of wilfully and for a consideration falsifying their reports or concealing information which would undoubtedly reject the applicant; still, to be weak is human, and it can be readily understood that where a slight doubt existed, a man fundamentally honest might give the benefit of it to the agent, if personally interested, instead of, as in duty bound, to the company. Other arguments might be adduced, if necessary, to show conclusively the ill effects to the company of giving agents any voice in the selection of examiners; they will, however, readily suggest themselves to any one who even casually considers the matter. I am aware that nominally all medical appointments are made at the home office, but practically there are very many exceptions to this rule.

The writer before quoted, who, I presume, is not a medical man, lays great stress on the advantage possessed by the examiner in the personal knowledge of the general health, habits, and local reputation of applicants. Except in very small places this knowledge rarely obtains. For the most part the persons to be examined are totally unknown, and in many instances are desirous of concealing any weak point in their history or present health. The canvasser also is frequently equally anxious to cover any suspicious circumstance in his client's history, and endeavors to hurry him through. When it is remembered how difficult it often is in private practice, with all the willing assistance the patient can give, to form an exact opinion as to the nature of a disease, or even in some instances as to the existence of a disease at all other than in imagination, it is not to be wondered at that persons suffering from obscure diseases, or addicted to vicious habits, with every motive for concealment, should manage to pass the most vigilant and honorable physician.

The duties of the medical examiner are to the conscientious man difficult and onerous, and their proper performance does not depend so much on the "business-like view" consideration of the "financial bearing," and other matters of that sort, as upon the possession of skill, thoroughness, honesty, and independence. The last may in a great measure be secured to him by the company for which he acts.

ON THE DIFFICULTY OF CORRECTLY ESTIMATING RISKS AT A DISTANCE.

BY A MEDICAL DIRECTOR.

If any one of our subscribers is tired of reading the dry and tedious details of the manner in which the examiner's report should be filled out, or how he should pay special attention to this, that, or the other part of the examination, let him attempt to pass judgment upon a hundred or more applications from distant towns. He will then doubtless appreciate the difficulties of the task, and sympathize with us in our efforts to lighten them.

If errors creep into the application in regard to matters of a professional nature, the physician at the home office is not surprised to find them, nor does he anticipate that these errors will seriously interfere with his reaching a tolerably correct estimate of the applicant's past history, present condition of health, and inherited predisposition to disease. A merchant, for instance, who had never studied medicine, would be very likely to give incorrect names to the sicknesses he had had, and the agent, who assists him in filling out his application, would of course not be able to render these statements any more accurate. If the physician at the home office possessed no other facts than these upon which to base his decision, the office of medical director might very properly be abolished. This deficiency, however, is meant to be supplied by the certificate of the examining physician. If the person to be insured says in his application that he has had "rheumatism," but leaves out the very important collateral facts as to duration, severity, and frequency of the attacks, the medical examiner is expected to bring out all these details in his report. If it was a moderately severe attack, it will be sufficient to simply state: "Acute articular rheumatism in 1862. Sick three weeks. No heart complication. No return since;" or, if insignificant in its nature—"Simply rheumatic pains. No fever. Not confined to bed." Many examiners think that if they simply answer *no* to the various questions in the form which they are required to fill out, the physician at the home office should be satisfied with this information. Experience has shown, however, that this is not a safe thing to do. Every medical director can recall instances where the examining physician has entirely overlooked serious sicknesses in the applicant's past history, notwithstanding the fact that the applicant himself had hinted to them in his application. The importance of this matter is brought out still more prominently by a study of the losses of any of our life-insurance companies. A comparison of the original application and medical examiner's report, with the certificate of the physician in attendance upon the applicant during his last illness, not infrequently reveals the fact that the seeds of the fatal disease were already sprouting at the time the company accepted the risk.

If medical examiners throughout the country are disposed to find fault with the home authorities for being too particular about apparently trifling matters, let them remember that in most instances they are en-

tire strangers to the medical director, and that in the next place the action complained of is necessitated by the experience of the past. They should make it a rule, furthermore, to explain satisfactorily, if possible, every pathological statement that may appear in the application. Much, if not all, of the present correspondence about imperfect medical reports would then be unnecessary.

CORRESPONDENCE.

To the Editor of the Medical Record.

I indorse entirely the article signed "Medical Examiner" in your issue of June 16, and would make one or two further suggestions.

It is hard for an agent who has spent days and weeks to secure an *apparently* good risk, to have his prospective commission knocked from his grasp by one or two words of a medical examiner. Many of them will not stand it, and if they have any doubt of the application's passing at the home office, they will fill out a new blank and try some other physician. To illustrate: Some six years ago, I examined a man for one of our largest companies and found a defect in one of his lungs. I do not remember now what it was. I afterwards learned that the agent made out a new application, took the applicant to another town, had him examined by a physician who he said was "not too conscientious," and he passed. I recently learned that the gentleman insured complains of weak lungs. Now I would suggest that the companies require the medical examinations to be made privately, without the presence of the soliciting agent, and that, when made, the application should be sent directly to the home office, by the examiner, not subject to inspection and review by the agent.

This plan would not be so lucrative for the agents, and would probably be opposed by them, but it would undoubtedly be better for the companies.

I think discussions of these subjects in your journal will tend in time to correct many absurd theories and practices in regard to the examinations, in different companies. S. Q. Lapius.

To the Editor of the Medical Record.

Sir: From an experience of several years as medical examiner for various companies, I feel sure that the most important change which can be made in the present mode of conducting examinations for life insurance is to have the medical examination made on a blank, entirely separate from the application, which should be forwarded to the company by the examiner, and not seen by either the agent or applicant. This reform was well advocated by J. C. R., in your journal for July 15, but my experience may perhaps be offered in support of his.

Let the questions concerning family history and the past and present health of the applicant appear on both the application and the medical examination blank, and then the separate statements can be used in corroboration of each other. Often an applicant, upon being questioned by me in regard to a certain point, would reply, "Let me see what I said about that to the agent;" but I say, "That has nothing to do with the matter; please answer *my* question."

On any disputed or doubtful points the agent will always give the applicant the benefit of the doubt, whereas the company should have the benefit of the doubt, or the case should at least be stated in full and not slurred over, as is done by nine agents out of ten. In saying this I do not mean to impugn the honesty of life-insurance agents, for the popular impression that they are all sharpers is of course entirely erroneous; but where one's self-interest is so much involved, any man, no matter how honest, will, unconsciously perhaps, favor his own interests.

Again, especially in country places and smaller cities, the physician, applicant, and agent are all perhaps fellow-townsmen and friends, and statements made in confidence to the medical examiner should be communicated only to the home office, and not passed through the hands of agents and clerks, who at some time or other may use facts thus obtained to the annoyance of an applicant. Many a man has facts in his family history and own personal history which he would tell without hesitation to the examiner, as the confidential adviser of the company, and one who is in the habit of daily hearing such confidences and keeping them to himself. Many an applicant, for this reason, leaves questions in the application unanswered, or evasively answered, until the medical examiner draws out the full statement.

Furthermore, the agent takes the application in the man's place of business, in a car or public conveyance, and in the presence of third parties, whereas the medical examination is made at leisure in the private office of the examiner.

Again, the medical examiner, no matter how competent or honest, if not a man of entire independence and decision (and we are not all such, unfortunately), often finds it difficult in doubtful cases not to be influenced by the solicitations of the agent, and to always say *no* decidedly, but will be led to state facts more mildly and more favorably to the applicant than he would if he knew the examination were only to be seen at the home office.

In smaller towns and cities a physician by rejecting an applicant will often lose patients and make enemies; whereas this trouble could be entirely avoided, and the responsibility thrown on the home office, if a separate blank were used. The companies should furnish the examiners with the necessary blanks, which, in addition to the medical questions, might be headed with the amount and kind of policy the applicant wishes.

Having had no experience at a home office, I am unable to say whether there are any good and sufficient reasons for not having separate blanks for medical examinations; but if this reform could be carried out, I feel sure that the examinations of the average examiner would be far more valuable and reliable than they now are. In large cities, where companies can pick their examiners from a number of competent physicians, and thus secure first-class men, on whom they can thoroughly depend, and with whom they can become personally acquainted, this reform may not be so important; but the large majority of examiners do not sustain these personal relations to the companies, and the more safeguards thrown about examinations the better for examiners and examinees. H. T.

Boston, Sept. 2.

EDITOR'S NOTE.

Anonymous Articles.—Writers of anonymous articles for the insurance department must not be disappointed if their contributions do not appear in the Record. If the contributor wishes to write under an assumed name, or anonymously, he has only to inform the editor by letter that such is his wish, and it will be complied with; but the real name and address of the writer must always be designated in the letter.

Original Lectures.

PAIN AS A SYMPTOM OF DISEASE.

A CLINICAL LECTURE.

By ALFRED L. LOOMIS, M.D.,

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(Reported phonographically for THE MEDICAL RECORD.)

To-day, gentlemen, I purpose to take up the subject of pain as a symptom of disease. Before the examination of patients who have pain as a prominent symptom, I will make a few general remarks upon the subject.

Ordinarily when the physician is called to see a patient, he is called for the purpose of giving relief to some prominent symptom. Sometimes this prominent symptom is dyspnœa, sometimes fever, but more frequently rather than for the relief of any other symptom the physician is called because the patient is suffering pain. When you are called to a case in which pain is a leading feature, you should regard it only as a symptom, although it may be a prominent one, and immediately set about finding an answer to the question, What is the cause of the pain? All pain indicates a morbid condition of the nerves or nerve-centres, and this morbid condition may be either in the peripheral extremities of the nerve or in its continuity, and it may be the result of a structural lesion, or simply a disturbance of nutrition in the nerve or nerve-centre. No patient has pain unless there is something wrong about the nerves, and usually the wrong is at the seat of the pain. Take, for instance, a case of pleurisy, and there is pain because the peripheral nerves are involved in the structural changes which take place during the progress of the inflammation. In inflammation we have redness, swelling, and pain; and pain as a symptom of inflammation is developed after the swelling has taken place, for with the swelling there is pressure on the peripheral nerves.

A common term for pain is neuralgia. This term is employed by different medical writers and physicians in very different ways, and with many different meanings. There are those who restrict the term neuralgia to functional pain, depending upon functional disturbances of the nerves or nerve-centres. There are those who restrict the term to disease of the nerve-fibre itself, induced by pressure or some form of disease of the nerve-tissue. If you look into the dictionary you will find that the word simply means pain in the nerve, consequently the term may be used by different persons in different senses, and with perfect propriety, for the expression of different conditions. I would restrict the term neuralgia to a condition of the nerve in which there is disturbance of nutrition. There are not necessarily structural changes in the nerve-tissue, but there is a disturbance of its nutrition.

We consequently have a very great variety of neuralgias. We have the malarial neuralgias; we have the neuralgias which occur in advancing life, first beginning when the patient is somewhat advanced in years. Its explanation in these later cases lies in the fact that the blood-vessels are becoming diseased, and the circulation is consequently more or less interfered with, and from this the nutrition is disturbed in all the tissues of the body, and in this general disturbance the nerves are involved.

There is another form of neuralgia which depends upon certain poisons which may be introduced into the system through the lungs, skin, or stomach. Syphilis I do not embrace under this head, but have special reference to the neuralgias which sometimes follow the constitutional effects of mercury, phosphorus, lead, etc. In these cases the patients have pain along the course and at the extremities of the nerve, which is undoubtedly due to an interference with their nutrition.

There is no question about the truthfulness of the statement that the nerve affected is not in a state of hyperæsthesia. As a rule, the tissues where it occurs are not in a state of hyperæsthesia; on the contrary, there is sometimes slight loss of sensibility in the part which is the seat of the neuralgia, and in some conditions, with the loss of nutrition we have disturbances of the function of the nerve, so far as it has to do with the nutrition of the part supplied by the nerve affected.

When I speak of pain in a nerve, or neuralgia, I mean that the nutrition of the nerve is interfered with, but not necessarily at the point where the pain exists. For instance, from disturbances of the cardiac plexus, by reflex irritation we have disturbances of the brachial nerves producing pain in the arm, in the top of the shoulder and base of the neck; or we may have the pain located in one particular point, in connection with irritation at a point very distant from the seat of pain.

Thus the introduction of ice into the stomach may cause a certain kind of pain in the head, which is reflex in character; but we cannot tell why the pain is produced by the introduction of the cold. Whenever a neuralgic cause is continued for a sufficient length of time, there will be interference with the nutrition of the affected nerves, and we may have as a result a chronic neuralgia. It is very common to have neuralgia in malarious districts, but it is necessary that there should be a certain amount of disturbance of the general system by the malarial poison before the constituents of the blood can interfere with the nutrition of the tissues; but when this point is reached we have fully developed malarial neuralgias. The list of neuralgias from blood-poisoning is a long one, and I shall not detain you with the enumeration. Why certain nerves are selected in malarial neuralgia, I cannot tell, and the same may be said of many other causes; it is simply a clinical fact. What I wish particularly to have you grasp is, that pain is not produced simply by a disturbance of the function of the nerve. Nor is it necessary that there should be any change in the constituents of the nerve which can strictly be classified under the head of pathological lesions.

After the exciting causes of pain have existed a certain length of time, atrophy of the nerve ensues; but when the atrophy comes, we have such changes taking place in the nerve that the pain usually subsides, and a paralysis takes the place of the neuralgia. This is especially the case where neuralgia depends on pressure along the course of a nerve, for wherever the pressure is continued sufficiently long, atrophy of the nerve takes place.

With these general remarks I invite your attention, first, to Miss H——, æt. 23, who gives pain as the prominent symptom in her disease. She tells us that the shortness of her breath and pain about her heart were the two things which led her to believe that she was sick. Dyspnœa and pain in her case, therefore, are the two prominent symptoms. She has suffered from the pain about one year, and she farther describes it as a sharp pain, which at times was so severe that she thought she was going to die. With this pain was associated a difficulty of breathing, which gave

her the sense of suffocation. As soon as the pain comes, for it comes and goes, she grows pale, the extremities become cold, and while the paroxysm lasts the symptoms are very urgent. This pain is in the præcordial region, extends upwards upon the side of the neck and head, through the left shoulder and sometimes down the left arm, but she never feels it in the right side, or down the right arm. We come now to ask the question, What may cause pain situated in this locality? Neuralgia is suggested by one of the gentlemen, and by that term he would take in all the conditions which indicate nutritional disturbance in the nerves. We would not speak of the pain of pleurisy in this sense, because we have there a pressure on the peripheral nerves as the direct cause of the pain. This pain in this patient I suppose may be called cardiac neuralgia. The cardiac plexus of nerves is involved, and the pain in the shoulder and down the arm is a reflex pain. This question involves a history of angina pectoris, for this form of cardiac pain may be regarded as one form of angina. The next question to consider is, What does such a cardiac pain continuing for a year indicate?

Probably it will be connected with some difficulty about the heart itself; and while the gentlemen are listening to this heart, I will say a few words about pain in connection with cardiac disease. Pain is not present in every case of cardiac disease, nor even in a majority of cases; but, on the contrary, in a majority of cases of cardiac diseases there is no pain. The class of patients in whom you would expect to have pain as a prominent symptom in connection with cardiac disease, pain in the shoulder, and pain running down the arm, are first, not *simply* valvular lesions of the heart, for in a majority of simple valvular lesions pain is not present; but the exact condition of the heart in those cases in which pain is present as a prominent symptom, is one of dilatation. As long as we have a valvular lesion which is compensated by a hypertrophy of the wall sufficient to cause the circulation to go on well, nothing special perhaps occurs; but when there is dilatation, the compensatory hypertrophy no longer being able to maintain an equality in the circulation, it becomes difficult for the heart to do its work, it staggers and pauses in its efforts, and we have pain.

We do not have angina or pain as prominent symptoms in cardiac disease, except in those cases in which there is a weakening of the walls of the heart, either from dilatation or degeneration of the walls themselves. Improper nutrition of the heart caused by disease of the coronary arteries may produce degeneration of the walls of the heart, and some of the books state that almost all cases of angina are due to a plugging up of the coronary arteries; but I am of the opinion that such statements are erroneous. The dilatation of the cavities of the heart which occurs in connection with valvular disease is the result of over-distention, and this distention is brought about by sudden calls upon the heart for increased action. For example, the walls of a heart are just able to do their work, when, from a valvular lesion, there is a certain amount of obstruction to be overcome. While everything is quiet, the heart performs its work very comfortably; but if the patient awakes suddenly in the night from fright, frightful dreams, or has the nightmare, and increased action is called for immediately, the left ventricle becomes distended and cannot empty itself; then the left auricle becomes distended, and from this the distention extends to the lungs, and the patient cannot breathe, except with a sense of suffocation; immediately the right side of the heart becomes distended, and by this simple distention of the heart the return of the blood is interfered with, and the man may die suddenly from the over-distention of the heart and interference with the coronary circulation. Angina therefore occurs in connection with organic lesions of the heart, either valvular or lesions connected with the coronary artery, which cause interference with the nutrition of the muscle of the heart itself. I do not believe that it ever occurs as the result of simple spasm of the heart. Patients may, perhaps, die with cardiac neuralgia, but the neuralgia is not the cause of death. Physical examination of the patient before you shows that there is some cardiac dilatation, the apex beating about two inches to the left of its normal position: that there is mitral obstruction, indicated by a presystolic murmur at the apex, accompanied by a purring thrill which almost certainly denotes mitral stenosis, and that there is mitral regurgitation indicated by the systolic murmur at the apex and communicated to the left. Let me impress upon you that pain as a prominent symptom in cardiac disease indicates disease of a serious nature, and when it exists as a constant symptom you are very apt to have a cardiac disease which you will not be obliged to watch for a very long time. In this patient, just as soon as the heart is overtaxed in the least, either from physical exercise or mental excitement, it gives rise to pain, and sometimes very distressing pain. The second case which I present to you, in which pain is present as a prominent symptom, is this man, 33 years of age, who gives no venereal history, but has had articular rheumatism three times. The last attack was in March, 1872; but he first felt pain in his chest in the following September. The pain in his case is located just at the right of the sternum—at about the junction of the third rib with the sternum—comes and goes, extends down the *right* arm, and is sometimes felt as low down as the elbow; it is a sharp throbbing pain, and can be produced at any time by excitement or exercise, but is relieved by making pressure over the point where the pain is located. In this case, as in the other, we will ask the question, What might be present to produce pain in this particular locality? Before answering that question, we may exclude diseases of the heart, now assuming pain as the chief criterion in making up the diagnosis, because there is no pain in the left side, shoulder, or arm.

One of the gentlemen suggests that the pain in this case may be produced by an aneurism. Mediastinal tumor pressing upwards is mentioned, and another gentleman suggests that it may be due to periostitis, or an exostosis as the result of periostitis. With regard to the mediastinal tumor and disease of the bones, it would hardly be expected that the pain would be increased upon exercise or excitement, as it is in this case, although there is a possibility that it might be somewhat increased. In addition, the pains of periostitis are localized, do not run down the arm, and are worse at night. These features are absent in this case; besides, the patient does not give any history of syphilis. It is not probably intercostal neuralgia, because it does not run along the course of the nerves, is throbbing in character, which is not the character of the pain in this form of neuralgia. Intercostal neuralgic pains sometimes come on after fatigue and exercise, but usually exercise does not produce them; besides, they are generally associated with other forms of neuralgia, and we do not have a localized pain, as in this case, at the point where the disease is. Physical examination of this man shows us a tumor situated in the same locality with the pain; it is immovable, has an impulse, and the impulse is obtained by placing the hand over the exact place where the pain is located.

This tumor extends about three inches in either direction, and there is also an impulse in the carotids upon both sides. At the seat of the pain we find all the symptoms of an aneurism—an aneurism of the ascending portion of the aorta, increasing upwards and laterally.

This third patient which I present complains chiefly of pain in the chest, and locates his pain in the same region as did the second—at the junction of the third rib with the right side of the sternum. He has had this pain nearly two years. He gives a complete syphilitic history. The character of the pain is burning, and he describes it as a "burning pain and heat." There was no tenderness upon pressure at first; but about six months after it first commenced, pressure began to give pain, and now pressure aggravates his pain very much. The pain is more in the evening. Exercise does not cause or increase it, unless he exercises with the arms. It is also worse at every change of the weather. In this case the pain is localized; there is no pain running down the arms or present in the shoulders. Sometimes the pain extends from the front through to the angle of the scapula behind, and this is its chief variation. Physical examination of this case reveals a prominence more marked than in the case which we have just examined, and extending from the upper portion of the clavicular to the lower border of the infra-clavicular space. As the hand is laid upon the tumor a distinct impulse is felt, a heaving impulse, which feels very much like the impulse of the heart. The apex of the heart beats in about its normal position; there are no cardiac murmurs, and there is no murmur present over the tumor. In the other man there were cardiac murmurs, cardiac hypertrophy, and dulness over the space occupied by the tumor. In this case there is great tenderness upon pressure, and dulness over the region of the tumor, but no cardiac murmurs or hypertrophy.

Again recurring to the question, What may give rise to pain in this locality, as well as the presence of such a tumor as is presented here? and the first answer which is made is *aneurism*. And at the same time the question is asked, Which are most painful, thoracic or abdominal aneurisms? The pain which accompanies both varieties is in the direction of the enlargement of the aneurismal tumor.

As a rule, patients do not suffer as severe pain from thoracic as with abdominal aneurisms. In aneurism of the thoracic aorta those patients suffer most who have aneurism of the descending portion of the arch pressing backwards upon the spinal column.

In connection with thoracic aneurisms we always expect to find cardiac hypertrophy. There is no cardiac hypertrophy present in this man, and there has been at no time an aneurismal *bruit*. The impulse is heaving in character, the man has had syphilis, and it seems to me altogether probable that he is suffering from an exostosis. Aneurisms in this locality do not get better; but this man is constantly improving in health, and the tumor is diminishing in size. The pain is probably due to changes in the bony wall of the chest at that point. As our hour, gentlemen, is up, I will continue this subject at our next clinic.

ONLY FOUR CENTENARIANS IN GREAT BRITAIN.—Mr. Thoms, in his treatise on "Human Longevity," asserts that of the regiment of centenarians claimed by Great Britain, only four seem to be incontestably worthy of such distinction, the statements of a large number being absolutely false, and of others more than doubtful.

Original Communications.

DRAINAGE THROUGH THE CUL-DE-SAC OF DOUGLASS, AFTER OVARIOTOMY:

WITH THE HISTORY OF A CASE.

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WHEN any proposed mode of treatment is under discussion, new facts for or against are valuable in helping to determine the final verdict. This is my reason for offering some observations on drainage after ovariotomy, and relating the history of a recent case. The paper on ovariotomy recently published in the *New York Medical Journal*, by Dr. J. Marion Sims, is particularly interesting, owing to the positiveness with which it advocates drainage through the cul-de-sac of Douglass. Indeed, far more is claimed in that paper than is well proved, though possibly the whole may be true. One might well hesitate to accept the views expressed regarding the pathology of fatal cases after ovariotomy, because the ground taken is not well sustained by the arguments given.

The same might to a certain extent be said regarding the method of drainage recommended. Drainage through the sac of Douglass has not been practised long enough to establish its merits. There are, however, good reasons given in the paper of Dr. Sims why this mode of drainage should have a fair trial by ovariotomists. All appear to agree to the necessity for drainage after ovariotomy, at least in many cases, and that the surgeon should in all cases be prepared to drain or wash out the abdominal cavity at any time, should necessity call for it; but there are, perhaps, not sufficient data derived from practical observations to determine the relative merits of drainage through the lower angle of the abdominal wound and through the cul-de-sac of Douglass. The favorable results obtained in the five cases of Dr. Spencer Wells, by puncturing the sac of Douglass to evacuate accumulations there, and the history of Dr. J. M. Sims's cases treated by this mode of drainage, are quite sufficient to justify any one in giving this mode of practice a fair trial.

Some of the arguments against this method are: That fluids will accumulate among the intestines in the abdominal cavity, and will not settle down into the pelvic cavity. To this it may be said, that the same objection may be raised against washing out the cavity through the abdominal wound.

Again, it is claimed that opening the sac of Douglass, and keeping it open by a drainage-tube, will allow the admittance of air and favor the decomposition of any fluids that may be present, and thereby induce septicæmia. This argument is not valid, in all cases at least, as the history given here will show.

A careful study of Dr. Sims's paper persuaded me that the mode of drainage recommended deserved to be tried more extensively than it had been, and I resolved to practise it the first time an opportunity offered. I found, however, the truth of Dr. Sims's statement when he said, "I am not satisfied with any method as yet adopted for drainage." To carry out the principles of drainage under consideration, the following indications must be fulfilled: a tube is required which can be introduced with perfect facility, retained in place with certainty, and be easily removed.

None of the instruments devised by Dr. Sims entire-

ly fulfil these requirements. With a view to improvement I had the following instrument devised: A trocar 8 inches long, and curved at the pointed end to correspond to the axis of the pelvic cavity. A canula 2¾ inches long is made to fit the curved end of the trocar.

Fig. 1. shows the general outline of this instrument.

About one inch from the upper end of the canula two pieces of silver-wire are attached, one on each of the straight sides. The canula, from these wires upwards, is perforated all round with small holes.

Fig. 2 shows this.

The canula has a screw-thread cut inside of its lower end, so that another tube can be attached to it. A small piece of tube, about half an inch long, has a thread cut on its outside, which fits into the thread in the lower end of the canula; at the other end of this tube there is a

Fig. 1.

Fig. 2.

Fig. 3.

small flange, made suitable for the attachment of a piece of rubber tubing.

This short piece of tube, with the rubber tube attached, is screwed into the lower end of the canula, after it is introduced, through the sac of Douglass, into the vagina.

Fig. 3 shows the short tube, with the rubber tube connected, the dotted line marking the latter.

The mode of introducing the tube is as follows: The operator stands on the left side of the patient. The trocar and canula are held between the first and second fingers of the right hand (the trocar being withdrawn a short distance to protect its sharp point). In this way the instrument is carried down to the most dependent portion of the sac of Douglass. A little pressure is then made on the handle of the trocar, sufficient to engage the point in the tissues. The handle is then seized in the right hand, and the first and second fingers of the left hand carried up into the vagina until the point of the trocar can be felt. While counterpressure is made with the fingers of the left hand, the trocar and canula are thrust through from the sac of Douglass into the vagina. The canula is seized between the fingers of the left hand, and held in place while the trocar is withdrawn. The left hand is then removed from the vagina, and the upper end of the canula held in place with the two fingers of the right hand, care being taken to see that the two wings of silver-wire projecting on each side of the canula are made to rest on the floor of the sac of Douglass. An assistant then introduces a bivalve speculum and exposes the lower end of the canula, and having the other tube ready, he screws it into the canula. The speculum is removed, and the rubber tube cut off at the requisite length, and the operation is completed.

What remains to be said regarding this method of drainage can be best given in the history of the following case:—

Mrs. C., æt. 30 years, mother of three children, the last six months old. Eighteen months ago she was seen, and a cyst of the left ovary diagnosticated. The tumor progressed in growth rather rapidly. In a few months from the discovery of her trouble she became pregnant. No great difficulty was experienced until the beginning of the ninth month of utero-gestation, when she had an attack of circumscribed peritonitis. She got well of that, and her child was born at full time. Her labor was normal, and she made a good recovery. In December she had another attack of peritonitis, which was quite severe. She recovered her health only partially after that. Her general condition being as good as we could hope to get, the operation was performed on the 15th of March, 1873. There were present Profs. Armor and Greene, Drs. Corey, Mason, Pilcher, Bunker, and Mr. Cushing.

On making the incision, I found the abdominal walls very much attenuated, and the sac was closely adherent. While trying to separate the two, the sac was opened. A trocar was passed into the sac through this opening, but the contents would not flow out. Two or three pins were passed through the edges of the opening of the sac, and a ligature carried around under them. This closed the wound in the sac. The incision was enlarged sufficiently, when adhesions were found all over the abdominal walls anteriorly and laterally. The omentum was also firmly adherent to the tumor. The adhesions were broken down with considerable trouble. Rather free hemorrhage followed, which required the use of persulphate of iron to arrest. The pedicle (a small one) was transfixed with silver-wire, ligated in two halves, and dropped back into the pelvic cavity. The drainage-tube was then introduced in the manner already described. This part of the operation was accomplished in less than four minutes. Cleansing the abdominal cavity was then undertaken, and some slight oozing from small blood-vessels arrested by the application of the persulphate of iron. At this stage of the operation the patient began to show signs of prostration, which necessitated our hastening the completion of what remained to be done. Consequently the most scrupulous care could not be exercised in cleansing the peritoneal cavity. The abdominal wound was completely closed in the usual manner. About one hour was occupied in the entire operation. She gradually rallied from the slight shock, and with the exception of an attack of vomiting, which continued off and on for about five hours, she made a most desirable recovery. At the end of 24 days after the operation, she was able to be around looking after her household cares.

I desire to call especial attention to the behavior of the drainage-tube, as that is the feature in the history of the case which is of interest. When the tube was introduced the rubber portion was cut off at the ostium vaginæ, so that the labia majora closed over the end of it. While the abdominal wound was being closed, bloody serum began to flow from the tube in small quantity. This discharge from the tube continued during the afternoon and night of the 15th. From about four o'clock until eight on the morning of the 16th no discharge occurred. Fearing that the tube might have become closed by a blood-clot or other obstruction, I injected about one ounce of

artificial serum. The discharge soon after that returned, and continued perceptibly through the day and into the night. On the morning of the 17th the flow was quite profuse for about an hour, during which time three large napkins were saturated with a dark, reddish-brown fluid. When this free flow subsided, a small red spot of fresh blood was observed on the napkin. Several more stains of the same kind were noticed through the day. This led me to suppose that she had begun to menstruate, but it was proved that such was not the case by first washing out the vagina and finding that clear water returned, and then washing out the tube, which brought away some fresh streaks of blood.

On the 18th the discharge of the same fluid was quite free; on the 19th and 20th it was scanty; there was no fluid at all on the 21st; during the 22d day there was a scanty flow of light-colored serum; on the 29th day, and the fourteenth day after the operation, the tube was removed. The patient was placed on the left side and Sims's speculum introduced; the lower end of the silver-tube was seized by the forceps, and while traction was made the vaginal wall was pushed backwards by the first and second fingers placed one on each side of the tube. This pressure upwards of the vagina with the fingers caused the flexible little wings of silver-wire (which retained the tube in place) to be folded up along the side of the tube, so that they offered no great resistance to the removal of the tube. While the tube was being removed the patient complained of pain, but it was only momentary, and subsided immediately on the tube being withdrawn. The opening made by the tube healed up very promptly.

I desire briefly to recall some of the advantages claimed for this method of drainage, and also the strongest objections raised against it. The facts in this case will show to some extent the truth of either or both. First, it is claimed that the abdominal and pelvic cavities are most conveniently drained through the sac of Douglass; indeed, it is the only way by which they can be drained. This case shows that drainage in this way can be accomplished very satisfactorily. As already stated, the abdominal and pelvic cavities could not be thoroughly cleansed during the operation; the abdominal wound was closed, while possibly there remained some blood in those cavities, and there was likely to be some more accumulated from oozing. Still, this was drained off, as was proved by the free discharge from the tube, and also by the fact that no trouble followed, which likely would have been the case if no drainage had been made. As already stated, objections have been raised to this mode of drainage on the ground that, while the pelvic cavity might be emptied in this way, accumulations would remain in the abdominal cavity. This is true, but only to a very limited extent. Fluid may remain among the intestines for any length of time in the dead subject; but if the trunk is made to incline from the head downwards, fluids will naturally gravitate to the pelvis. This settling down of the fluids is materially aided by the peristaltic action of the bowels.

Evidently many ovariotomists recognize this fact, and give directions to have the head of the bed elevated so that any fluids may settle down into the pelvis. Granting, however, that a tube in the sac of Douglass is not certain to keep the abdominal and pelvic cavities free from fluids, it is also evident that the two cavities cannot be emptied with any more certainty through an opening in the lower angle of the abdominal wound. Again, it is stated that Prof. Wm. Warren Greene (who was among the first, or the first, to establish drainage in this way) has abandoned it, because he believes that inflammation of the areolar tissue and its consequent results were induced by the presence of the foreign bodies in the roof of the pelvis. It must be remembered, however, that Prof. Greene's method of drainage was very imperfect. He simply brought the ends of the ligatures of the pedicle out of the sac of Douglass into the vagina. This could not insure a reliable opening for drainage, and the presence of organic ligatures would be much more likely to cause irritation and inflammation than the metallic tube.

Strong objections have been raised to this mode of drainage, on the ground that by making an opening in the sac of Douglass air would be admitted and expelled by inspiration and expiration. This would favor the decomposition of fluids, and increase the danger, which we wished to avoid. I am perfectly satisfied that this did not occur in the case here related. The patient being firmly bandaged and lying quietly in bed, her breathing was wholly thoracic, so that the pelvic organs were not disturbed at all by the action of her lungs. The labia majora closed over the end of the tube, acting as a valve and preventing air from entering. While the fluid could and did flow away, there was not the slightest disposition to the entrance of air. This can be very readily understood when we remember that no air can enter the pelvic cavity unless a vacuum is formed, and during respiration, when the body is inclined towards the feet, no such vacuity occurs. Air cannot enter the peritoneal cavity through such a drainage-tube any more than it would enter the uterus during menstruation.

If time and experience prove that this mode of drainage can be practised generally with the same safety as in this and other cases treated so, then there will be no doubt as to the superiority of this plan of treatment.

If fluid can be safely removed in this way from the peritoneal cavity as soon as it forms, the decomposition and septicæmia from that source will be prevented, which is certainly much better than any mode of treating blood-poisoning after it occurs.

It is much to be regretted that Dr. Sims leaves his views on pathology so widely open to criticism. His failure to establish the views he holds, regarding the nature of septicæmia and its causes, will lead many to doubt the treatment which he recommends, though it may be most valuable. Sound pathology generally leads to correct therapeutics; but it must be remembered that we occasionally employ treatment, which is known to be most satisfactory, in cases where our views on pathology are obscure and uncertain.

TREATMENT OF ULCERS BY ELECTRICITY.

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Having alluded incidentally to the local treatment of ulcers by electricity,* it may not be out of place to say a few words generally in regard to the mode in which it should be employed.

The method I usually adopt is first to apply a disk of platinum, silver, or zinc, connected with the positive pole of the battery, directly to the base and sides of the ulcer, and then to close the circuit by an electrode, previously covered with clean linen and well moist-

* Part of a paper on the Construction, Use, and Mode of Application of the Galvanic Nipple-shield.

ened with warm water, applied to the edges and around the ulcer for five or six minutes. After this I use for a minute or two longer both poles labile around the sore to the extent of an inch or more, in order to modify malnutrition and stimulate the enfeebled capillary circulation, as well as to electrolyze the callous and infiltrated tissues surrounding the ulcer, and to promote absorption of the exudations.

Should a case of noma pudendi, cancroid, sloughing ulcer, etc., present itself, I use occasionally, as an auxiliary with electricity, a saturated solution of chlorate of potassium, dilute nitric, sulphuric, or hydrochloric acid. I prefer, however, to use the dilute mineral acids, on account of their astringent and chemical properties. I cover the bottom of the ulcer with a little lint, raw cotton, or granulated sponge, and then wet the sponge with whatever agent the nature of the case may seem to require, and apply the metal disk directly to the saturated material; and while I keep one electrode stationary for a few moments in the ulcer, I work the second conductor slowly around the diseased part. I maintain this mode of treatment daily for a few applications, or until the recuperative process is manifest in the ulcer.

It is unnecessary for me to give here a detailed account of the electro-chemical changes which take place at each pole when applied to ulcers, especially when using the various remedial agents mentioned. It will be sufficient for my purpose to remark, that if I wish to use a powerful diffusive agent in a nascent state, such as the chloride of zinc, chlorine, oxygen, etc., I have the immediate means at command. By this method of treatment, and in some special cases also, the advantages of both electricity and topical medication are combined, and are in direct application to the diseased part, and thus we are furnished with reasons to expect more decided and beneficial results than could be hoped for by a single remedy.

I avoid, generally, after local galvanization, all greasy applications to ulcers, and employ as a dressing a little lint, dry, or wet with the solution of chlorinated soda, pure or diluted with water. Occasionally, if the ulcer is small and well-filled with good, even, healthy granulations, I allow nature to take her course in forming a sound cicatrix. This is done by exposing the ulcer to the oxidizing influence of the air for a short time.

When treating ulcers by the electrolytical method, speedy and better results can be obtained by applying the galvanic current as strong as can be comfortably borne, keeping the poles close to each other for five or six minutes in and around the ulcerated part, and by having a séance once or twice a day until there is decided manifestation of a healing process visible, when every third or fourth day will be sufficient for a sitting.

Should an exuberant growth of granulations spring up in the ulcer, an electrode of silver or platinum, connected with the negative pole, should be applied directly to the spongy mass, and the circuit closed on the adjacent parts, and then a strong battery-current should be employed, but not too powerful to cause pain, until the granulations present a smooth, shrunken, and seared appearance, as if they had been slightly cauterized with a hot iron. After this effect is produced the poles should be reversed, and the séance finished with the positive pole in the ulcer for two or three minutes longer.

I have noticed when treating ulcers, particularly open buboes, with the negative pole, by means of a metallic conductor in the sore, that the effect of the action of the pole is somewhat similar to that produced by the local use of the peroxide of hydrogen.

Fistula in ano, when free from any complications, can be successfully treated by introducing an electrode of platinum (a silver probe or a piece of platinum wire No. 14 will answer) into the fistulous canal, and into the rectum a scoop made of wood or hard rubber. The circuit should be closed by the application of a well-moistened chamois-covered disk on the neighboring parts, and moved slowly around and over the fistulous canal in a labile manner.

The object of using the scoop, when the fistula is complete, is to allow the free end of the metal electrode, when inserted in the sinus, to rest against it. By this means we can avoid causing unnecessary irritation or pain in the rectum during the application. The rectal scoop is not required when the fistula is incomplete, with the opening external.

The advantages of this simple and bloodless method of operating are, that it does not need any preparatory treatment, or cause inflammation, hemorrhage, or absence from business. The fistula neither requires dressing, nor is constipation of the bowels necessary after the operation.

One application of galvanism is generally sufficient to close the abnormal opening, which usually occurs in five or six days. The séance should not be longer than from eight to ten minutes. When insensibility is rendered by ether, etc., a strong battery-current should be applied, using the negative pole in the sinus for five or six minutes; then the poles should be reversed, and the positive employed in the fistula during the remainder of the sitting; or we use an application as strong as can be comfortably borne for twenty minutes' duration, without the use of an anæsthetic.

Plated electrodes should not be used on moist or ulcerated surfaces when attached to the positive pole, unless we specially wish to form an oxide, etc., of the metal employed. With a negative connection, however, there is no objection whatever to their use.

As a rule, I would recommend generally the use of platinum or gold, *and especially when we desire ozonization*. When the positive pole is formed of any oxidizing metal, *ozone is not formed*, and the electrode is quickly oxidized.

Dr. Althaus has ascertained, when experimenting on the different animal tissues and fluids of the body by electrolysis, that oxygen, acids, and albumen are accumulated at the positive pole, and hydrogen and alkalies at the negative pole. These agents give the key for further scientific research.

Ozone is supposed to be an intensified, or an allotropic modification of oxygen, and is one of the most powerful oxidizing agents we possess. It has a strong, peculiar odor, which somewhat resembles weak chlorine.

Antozone is also an active condition of oxygen; it unites with water, and is a strongly oxidizing in its action.

Oxygen is a colorless, odorless, and tasteless gas.

Chlorine is a yellowish-green gas of a peculiar suffocating odor.

When treating a large indolent ulcer, situated on the lower extremity, by galvanism, with the positive pole in the sore, I could easily detect the odor of ozone as evolved. This fact induced me to subject to galvanization a piece of lean raw beef, with both poles placed about half an inch from each other. I employed plates of platinum, as this metal forms the best electrode for electrolytic purposes.

At the anode (positive pole) the ozone odor emitted was manifest in a marked degree to the sense of smell, while at the cathode a fleshy odor only was perceptible.

I did not wish to trust altogether to the sense of smell, but was anxious to ascertain its presence beyond a doubt by chemical reagents. The following are the methods I employed when experimenting for ozone: I selected a portion of perfectly fresh beef, free from fat, for each test. Meat that had been kept on ice, or the least tainted, should not be used; for though we may succeed with every reagent employed to-day, we could not, perhaps, with the same meat obtain a satisfactory result on the following day. I submitted a portion of a healthy placenta to galvanization. In a few moments the odor of ozone was perceptible in every part of my office, and at the same time I noticed that there was also a large quantity of hydrogen evolved at the negative pole, with occasional mimic explosions beneath the disk, scattering a bloody froth in all directions. The free elimination of hydrogen and ozone in this instance was to me remarkable, and was in quantity about five or six times as much as I could obtain from a piece of beef of the same size. When ozone is specially prepared, and in its purity, we meet with no difficulties when testing. But with the methods I have adopted a few extraneous agents are developed at the same time with ozone by the electrolytic action of the positive pole. These substances would necessarily interfere more or less with the character of the tests employed, while the small quantity of ozone evolved would not be sufficient to characterize satisfactorily a few of the tests, as, for instance, with indigo a very weak solution should be employed.

The instrument I used when experimenting was a zinc-carbon battery of thirty-two cells, manufactured by the Galvano-Faradic Co.

METHOD I.

After electrolyzation of the beef, and the removal of the conductors, I laid a piece of white bibulous paper, previously impregnated with a solution of iodide of potassium, and then pressed the paper gently with porcelain buttons against the electrolyzed portions of the meat for a few moments, when a brown stain was produced on the paper, oxidizing the potassium and setting the iodine free. By this method of testing I found a few agents satisfactory, while others gave only a faint indication of ozone.

METHOD II.

Upon a glass plate I placed a piece of bibulous paper, saturated with a reagent, and over the paper a thin slice or shaving of raw beef, lastly the platinum plates. I then employed a strong galvanic current for a few minutes. I expected by this method that as soon as the ozone was evolved, and from its diffusive character, a sufficient portion would at least penetrate the meat, and come in contact with the prepared test-paper. Most of the tests employed by this mode of experimenting gave satisfactory results.

METHOD III.

On a piece of raw beef I applied a strip of thick blotting-paper (about one-third the width of the conductor), over it the metal disks. I had my tests, etc., at hand, and as soon as the ozone odor was developed I removed the conductors, and immediately brushed the surface of the paper which had been allowed to remain on the meat with a test solution. By this proceeding the blotting-paper was impregnated with ozone sufficient to characterize satisfactorily whatever tests I choose to employ.

In treating ulcers I have also applied the above method of testing.

METHOD IV.

I placed a piece of beef on the bottom of a small glass jar, and over it the metal conductors, and securely covering the vessel, allowed only the wires of the disks to be exposed, to form the connections with the battery. The test papers were suspended from the inside of the cover, directly over the electrodes. This method gave very unsatisfactory results.

"Necessity is the mother of invention." I may not have employed the most scientific method of ascertaining the presence of this odoriferous agent; however, such as it is, I am convinced of one fact, that I have discovered that ozone is developed by the electrolytic action of the positive pole when applied directly to ulcers. I feel assured in saying of this discovery, that it will have a practical and very important bearing, and aid us also to arrive at a more definite and scientific basis as to which pole we should employ directly in the treatment of diseases by electrolysis.

I find no reference whatever regarding its use or mode of application in any work on electro-therapeutics which I have consulted. I am aware that ozone is derived by the action of the ordinary electrical machine, and evolved when we strike together the metal conductors of a galvanic battery in operation, by chemical action, etc.

OZONE.

TESTS.	Positive Pole.	Negative Pole.
Odor	Sensibly manifest to the sense of smell.	Fleshy odor.
Iodide of potassium	Brown color.	No change.
Iodide of potassium and starch	A purplish shade of deep blue.	"
Tincture of guaiacum	A beautiful shade of light-greenish blue.	Orange-yellow.
Silver leaf	Oxidized.	No change.
Indigo	Decolorized.	"
Reddened litmus paper	Bright red.	Blue.
Blue litmus paper	Reddened.	No change.

Galvanism, when employed in the treatment of ulcers, possesses many important and decided advantages which are wanting in the usual local remedies daily in use. It is easily applied, and its action is various, that is to say, it is electrolytic, catalytic, and thermal. *The elements evolved by the decomposing power of the positive pole*, especially where the conductor is formed of an unoxidizable metal, and applied directly to *the ulcer, possess the following properties: stimulant, antiseptic, disinfectant, deodorizing, oxidizing, besides possessing the power of coagulating blood and albumen, as well as promoting absorption of the abnormal secretions.*

It matters little in the surgical treatment of ulcers what the nature of the agent or agents may be, their action when developed by electrolysis, or whether its beneficial effect are due more to the primary or secondary chemical results which occur in the ulcer during the application. It is sufficient for our purpose when we have the practical fact, that ulcers heal rapidly after its application, generally in about one-sixth the time ordinarily consumed by the usual methods of treatment.

The flabby livid-colored granulations, which are usually found in indolent ulcers, after one or two applications of galvanism are soon changed to a healthy flesh or rose color.

To this method of treatment I would give the name *galvano-ozonization*, a term which fully characterizes its nature.

I am sanguine enough to believe that we have no single remedy or mode of treatment with which I am acquainted during the thirty years I have been engaged in practice, which can be compared to the *galvano-ozonic* method when properly applied to ulcers. The latter usually heal in one, two, or three weeks, when by other methods they frequently take as many months or more to accomplish. This form of application does not interfere with any other kind of treatment, local or constitutional; but on the contrary, allows us to use whatever means the case may require.

Of the electrolytical treatment of malignant ulcers I cannot say as much as regards galvanization alone. My experience of this class of diseases is too limited to give a decided opinion. Of one fact, however, I am certain, it will have a soothing effect, so as to relieve acute pain, and aid considerably whatever local or constitutional treatment may be employed. But this is effected through the direct application of the positive pole. The negative pole in some special cases will occasionally cause the ulcerated surface to slough or spread. Nevertheless we may use both poles in the ulcer at the same time, or the negative first and the positive pole the last.

The thermal effect of galvanism can be easily ascertained by submitting a piece of cooked fresh beef for a few minutes to a strong galvanic current, and after the removal of the metal conductors, the portions of the meat which had been electrolyzed will be found heated to such a degree as to be almost impossible to hold it in the hand even for a few moments. The heat developed on raw beef is not so manifest, owing to the large quantity of moisture in the tissues.

Localized faradization, when employed in the treatment of ulcers, affords very unsatisfactory results. This is no doubt due to the feeble electrolytic action of the induced current.

239 East 10th Street.

Progress of Medical Science.

On the Employment of Perchloride of Iron to Arrest Post-Partum Hemorrhage.—On the 5th of February Dr. Heywood Smith presented to the Obstetrical Society, of London, the following case, illustrating the treatment of post-partum hemorrhage by the intra-uterine injection of perchloride of iron. The patient was delivered of a male infant on the 26th of January. The placenta came away easily in twenty-five minutes. On the third day, the patient complained of severe pain in the hypogastrium. On the tenth day hemorrhage occurred. On the eleventh day, hemorrhage continuing, a solution of one part of strong liq. ferri perchloridi to eight of water was injected. On the sixteenth day, bleeding continuing, the injection was repeated. On the eighteenth day the uterus was again injected with iron, one in four, and again on the twentieth day with equal parts of the solution of iron and water. On the twenty-first day a strong solution of iron was injected into the uterus with a uterine syringe holding about two drachms. This produced severe pain, but completely stopped the hemorrhage, which never amounted to flooding, but oozed continually, and was of a bright-red color. On the twenty-third day the patient was delirious, and the discharge brown and offensive. On the twenty-fifth day she had occasionally great dyspnœa, and picked at the bedclothes, and on the twenty-eighth day she died. The uterus was nearly five inches long and four inches broad, and its walls three-fourths of an inch thick. Its anterior and posterior surfaces were marked with black streaks. The tissue was soft, but otherwise apparently healthy. Its inner surface was covered with a dark reddish-black fluid; and at the junction of the upper third with the lower two-thirds was a depression stained black. Near the centre of it an artery hung out more than an eighth of an inch. Close to the depression, and fitting into it, was a rounded mass of placenta about the size of a small filbert. A small portion of the end of an artery showed the free extremity slightly puckered, its margin rounded, and the canal unobstructed. Dr. Smith believed the case taught—

1. That post-partum hemorrhage, happening after complete contraction of the uterus, and, therefore, after the uterine sinuses have been emptied of blood, is evidently arterial.

2. That when a solution of the perchloride of iron is injected into the uterus, the sinuses take it up and carry it into the veins, the tissues also immediately surrounding the sinuses becoming stained.

3. That the perchloride of iron does not produce contraction, nor, by coagulation of the blood, blocking of the orifices of the uterine arteries.

4. That the perchloride of iron is a styptic, the use of which in the cavity of the puerperal uterus is not innocuous.

In the discussion that followed, Dr. Routh spoke of a case in which the patient was treated with a weak solution of tincture of iron and water for post-partum hemorrhage, and died of puerperal fever, which set in on the third or fourth day, and which, he thought, might be due to the mode of treatment. Dr. Graily Hewitt related a similar case, in which a solution of one to four had been employed, and the patient subsequently died of peritonitis. Dr. Murray had used this mode of treatment with success in ten cases, and thought there was more danger in delay than in its employment. Dr. Braxton Hicks thought Dr. Smith had employed too strong a solution, and remarked that it would have been well if the cervix had been dilated and the interior of the uterus examined. He believed pyæmia might result from depression after severe hemorrhage, where no injection of perchloride of iron had been used. Dr. Sell said that no unfavorable results had attended the use, in Vienna, of a drachm of sesquichloride of iron to one pint of water, when the administration of ergot and the injection of cold water failed to arrest hemorrhage. Dr. Playfair had employed this mode of treatment in several cases, and only once without success. Dr. Smith's case was one of secondary hemorrhage, due to retention of a piece of placenta. He also called attention to the use of too strong a solution of the perchloride.

On the fifth of March the discussion was renewed by Dr. Snow Beck, who stated that he had met with several cases where death had followed the injection of perchloride of iron into the gravoid uterus, to arrest post-partum hemorrhage, all the women presenting symptoms quite analogous to those known under the name of puerperal fever. It was now ascertained that hemorrhage only occurred when the uterus was relaxed. This relaxation allowed the canals of both the arteries and the veins to remain open, when blood was poured out from the arteries, and any styptic injected was too often taken up by the veins, conveyed into the general system, and

caused the certain death of the individual. This had always been verified on the post-mortem examinations he had made. He recommended, however, sponging or swabbing the inner surface of the uterus with an astringent, when the local use of cold, and the introduction of the hand were not sufficient to cause uterine contraction, and this might require to be repeated. Dr. Wynn Williams recommended swabbing with a sponge saturated with equal parts of tincture of perchloride of iron and water—a string being attached to the sponge, which is to remain *in situ* if not expelled by contraction of the uterus. Dr. Protheroe Smith recommended the undiluted tincture of matico instead of the iron tincture, as calculated to avoid some of the dangers attending the use of the latter. Dr. Holman thought the use of the iron solution had, in his hands, saved several lives which would otherwise have been lost. Many patients, especially in the upper classes of society, were in such a debilitated condition as to be quite prostrated by the mere act of parturition; and after it the uterus seemed to have had no power of contraction. In these cases he believed the injection of iron to be of great value. Dr. Edis had seen a case of hemorrhage, occurring ten days after delivery, in which the injection of an ounce of the pure tincture arrested hemorrhage when an injection of equal parts of the tincture and water had failed to do so. In this case no pain or inconvenience followed the treatment. He had used the pure tincture in several other cases with marked success. Dr. Rogers had injected the pure tincture in seven cases with immediate good results, and in only one had serious consequences followed, and this case recovered. He recommended it only as a *dernier ressort*.

Dr. Barnes believed this question was to be decided not by *à priori* anatomical closet speculations, but by experience at the bedside, and said that Dr. Beck, admitting he had never used the remedy, or seen it used, labored by ingenious anatomical argument to prove that perchloride of iron *could not* cause the uterus to contract or close the arteries. The simple answer was that it *did both*, and did it effectually. He had often had his hand in the flaccid, bleeding uterus to clear out placenta and clots, and felt the inner surface of the uterus contracting, corrugating, crinkling under the contact of the iron as it flowed, stopping the bleeding and expelling the hand. Dr. Beck had asserted that ergot, cold, galvanism, and pressure were sufficient to arrest hemorrhage, but he (Dr. Barnes) had seen many women bleed to death after all these means had been used unsuccessfully by skilful men. Referring to the case mentioned by Dr. Bantock, Dr. Barnes said certainly the pain must be attributed to the injection, but it did not follow that it was the cause of death. Dr. Routh's case was one of septicæmia, for which he certainly could not blame the perchloride. Septicæmia sometimes occurred when no styptic had been used. Dr. Barnes added that it had struck him as a remarkable fact that in these discussions those who condemned most warmly the practice of injecting iron solutions to arrest hemorrhage were men who had at most seen it used once, whilst it had been emphatically approved by men whose experience was greatest, and who had used the remedy frequently. Nothing could be truer than Dr. Holman's statement of the risk run by delicate, pampered women, who become exhausted by the mere effort of bringing forth a child. In these cases, where the uterus could not be made to contract, where he could not rely upon reflex excitation, when grasping the uterus must at length be abandoned, then it was that perchloride of iron came in as a new power to save life in the last extremity.

In No. 2 of the *Obstetrical Journal*, Dr. W. S. Playfair gives the history of a case which occurred to him soon after these discussions, in which the use of the perchloride had twice saved the life of a patient when other means had entirely failed. On the second occasion the case progressed favorably for two days, when the pulse and temperature rose. The symptoms assumed a grave character, but at the end of a few days improved coincidently with the discharge from the uterus and vagina of decomposing clots of blood and iron, and from this time the patient recovered rapidly.

In No. 3 of the same journal, Dr. A. B. Steele reports three additional cases which tend to confirm the statements of Dr. Barnes. Dr. Steele believes that the action of the iron injection is not so much that of a direct styptic or hæmostatic as that it is an exciter of reflex contractions of the uterus.

One class of cases to which this mode of treatment appears specially adapted is, he thinks, those not uncommon and most troublesome forms of flooding which might be called recurring hemorrhage, where the uterus alternately contracts and relaxes, and where it is difficult to determine when the patient can be pronounced free from risk of further bleeding.

In a case of abortion at the fourth month, where hemorrhage was not arrested by dilating the cervix and swabbing the cavity of the uterus with undiluted liq. ferri perchloridi, the removal of a minute portion of placenta from the fundus at once put an end to the bleeding.

A Case of Precocious Menstruation.—R. K. Clark, M.D. (*Boston Med. and Surg. Jour.*, writes that a girl, aged 6 years, has menstruated regularly once in twenty-eight days since September last. She is not precocious in any other respect, not large of her age; but the usual change in form suited to a young lady 15 or 16 years of age has taken place, so that she looks like a little woman. An aunt of the child became regularly menstrual at six years of age and continued till she was thirty-eight.

Excision of the Hip-Joint.—G. Troup Maxwell, M.D. (*Phila. Med. Times*), records a successful case of excision of the hip-joint. The patient, male, aged 35, had labored under coxalgia, or tuberculosis of his right hip-joint, eighteen years. He has now a comparatively useful limb, shortened slightly, but with a little motion in the joint, and fitting him for employment in many vocations.

Liquor Ferri Subsulphatis.—V. J. Fourgeaud, M.D. (*The Western Lancet*), has for years relied principally on the liquor ferri subsulphatis, both for local application and internal administration, considering it the most valuable remedy for that class of diseases characterized by exudations, vegetations, false membranes and abnormal formations and growths of a humid and superficial nature on the mucous membranes. He applies the undiluted solution to the affected parts by means of a camel's-hair brush or, better, of a piece of sponge, smaller than is generally used for throat probangs, attached to a suitable holder. In applying the medicated sponge, it should be gently rubbed on the affected parts. The peculiar action of the solution on the exudations or false membranes will cause them to break up more or less completely, according to their different degrees of adhesiveness to the mucous membranes, as shown by the pieces adhering to the sponge, and, also, by their presence in the immediate expectoration. With the local treatment, he prescribes the following for internal adminis-

tration: ℞ Potassæ chloratis, ʒij.; Glycerinæ, ʒi.; Quiniæ sulphatis, ʒi.; Liquoris ferri subsulphatis, gtt. xx.; Aquæ, ʒij. M. Half a teaspoonful to a tablespoonful, according to age, every four hours.

Case of Rupture of the Iris.—Dr. Geo. H. Powers (*Western Lancet*) relates a case of rupture or coloboma of the iris, in a female patient, aged 15, caused by the shock of a blow upon the lid, unaccompanied by any wound or abrasion of the external tunics of the eye, or by internal hemorrhage, or by permanent luxation of the lens, or thus far by cataract. The iris is so far restored in its contractility, that the pupil is very little, if any, larger than that of the other eye, but its displacement downwards causes double images to some extent. Vision is still improving in clearness, and the patient can read large letters. Dr. Powers has never seen a similar case and does not remember one where the injuries were not much greater than in this instance.

Progressive Myopia and its Operative Cure.—Richard H. Derby, M.D., of New York (*N. Y. Med. Journal*) reports several cases of this affection and shows evidence in favor of tenotomy in this class of cases. He calls the attention of the profession to the importance of muscular insufficiency as a cause of progressive myopia, a fact first established by Von Graefe, and rightly regarded as one of his most brilliant contributions to ophthalmic literature.

As a rule, tenotomy is to be performed on that eye which first deviates outward on approaching the fixation object, or it is to be performed on the eye with the strongest facultative divergence, or on the one with the worst acuteness of vision. Immediately after the operation, the effect must be controlled by means of the equilibrium test, made in what is called the "position of election."

The operated eye is to be bandaged, in order that as far as possible no movement of the eye shall modify the immediate effect. If it has been used, the patient must be seen within six or eight hours after the operation, and the equilibrium test made in the position of election.

Poisoning from Chlorate of Potassa.—A. M. Ferris, M.D. (*Pacific Med. & Surg. Jour.*, June, 1873), notes a case of fatal poisoning from chlorate of potash. The patient, male, a native of Ireland, æt. 26, had taken a large spoonful of the article by mistake for Epsom salts. The post-mortem showed that the lungs were healthy, without blood stasis and signs of previous disease. The heart was normal, the walls being of average thickness and valves free from disease. The auricles were distended to their utmost capacity by dark coagula, homogeneous, and of sufficient tenacity to support their own weight and sustain the coat of the cavities from which they were drawn. The large vessels communicating with these cavities were also full of coagula of the same appearance. On removal of the heart, there was but little blood flowed from any of the severed vessels.

Solution of Camphor in Erysipelas.—In the *Gazeta Medica da Bahia* it is said that a few drops of a solution of equal parts of gum camphor and ether, applied from time to time to an erysipelatous surface will, in the majority of cases, effect a cure.

Amenorrhœa.—Wm. H. Baker, M.D., Senior Assistant House Surgeon, N. Y. State Woman's Hospital (*N. Y. Med. Journal*) records three cases of amenorrhœa resulting from undeveloped uteri, in which galvanism or electro-magnetism, applied as a direct stimulant to the uterus, afforded marked benefit.

Pelvic Hæmatocele.—T. G. Wylie, M.D., House Surgeon to N. Y. State Woman's Hospital (*N. Y. Med. Journal*) publishes an interesting case of pelvic hæmatocele, with recovery. The patient, aged 28, when first seen had miscarried six years previously, and for the last two months had uterine hemorrhage. A tumor was discovered in the rectovaginal wall, filling up the *cul-de-sac*, displacing the uterus forward and upward above the pubic bone. A small trocar of an aspirator was introduced twice in the lower part of the tumor from the vagina, and bright red blood was withdrawn, which afforded relief.

Contribution to the Study of Puerperal Septicæmia.—Dr. A. d'Espine has, in the *Archives Gen. de Medecine*, an article under this title, in which he attempts to study the different forms of puerperal poisoning, from the mildest to the most serious, and to show by an uninterrupted series of observations that all these forms belong to the same family. According to M. d'Espine puerperal septicæmia is not a disease by itself, but a series of local and general accidents, more or less grave in character, determined by the absorption of septic material at the surface of a solution of continuity of the utero-vaginal canal, the difference between the divers typical forms depending upon the variable amount of septic material absorbed, and to the mode of introduction—whether by the venous or lymphatic system. These accidents are not peculiar to the puerperal state, and resemble those which produce septicæmia in wounded men and animals.

The point of departure is always in the uterus or vagina; all causes which interfere with cicatrization of the uterine wound, and favor the development of septic material on its surface, are the efficient causes of puerperal septicæmia.

The lymphatics are the usual routes through which the poison is absorbed, and lymphangitis is the ordinary, but not necessary evidence of its passage.

Peritonitis is a *lésion de voisinage* due to the transportation of the septic material by the uterine lymphatics, and comparable to the local inflammations which are developed in the neighborhood of infected wounds.

The effect of the absorption of septic matter upon the organism is to produce congestions and inflammations in all the organs, particularly in the lungs, kidneys, and intestines; subserous ecchymoses or interstitial apoplexies; inflammations, which tend to become localized, especially in the serous membranes, as shown during life by fever, diarrhœa, pulmonary congestion, and epistaxis, followed by transient cutaneous eruptions.

The absorption of purulent matter and of septic material are clinically confounded with each other.

Milk fever does not exist. The fever of the first week is almost always a mild septicæmia due to absorption of the lochia by little wounds in the utero-vaginal canal. It can be prolonged for several weeks when uterine reaction does not take place, and when the lochiæ is fetid, in which cases it is almost always possible to find ulcerations of the cervix or vagina, which are the sites of the absorption.

These mild infections are frequently, but not always, accompanied by uterine angioleucitis and signs of light perimatritis. Whenever the infection is prolonged, death may occur from septic phthisis.

Puerperal pyæmia is a complication of septicæmia,

and coincides almost always with phlebitis of the uterine veins. It is a complication relatively rare, and due, according to all probability, to septic emboli.

Metastatic abscesses of the viscera and their tributaries, as well as nearly all inflammations of the cellular tissue of the articulations, are due to lymphatic infection, and are not embolic.—*Gaz. Méd. de Paris*, June 21.

THE DEAD PRESERVED LIKE WAX.—The Brunetti method for the preservation of the dead consists of the following processes: The circulatory system is cleared thoroughly out by washing with cold water till it issues quite clear from the body. This may occupy from two to five hours. Alcohol is injected so as to abstract as much water as possible. This occupies about a quarter of an hour. Ether is then injected to abstract the fatty matters. This occupies two to ten hours. A strong solution of tannin is then injected. This occupies for imbibition from two to ten hours. The body is then dried in a current of warm air over heated chloride of calcium. This may occupy from two to five hours. The body is then perfectly preserved and resists decay. The Italians are said to exhibit specimens which are as hard as stone and retain the shape perfectly and are equal to the best WAX models.

A more simple form of preparation for injection, well suited for anatomical purposes, consists of glycerine, 14 parts; soft sugar, 2 parts; nitrate of potash, 1 part. It is found that, after saturation for some days in this solution, the parts become comparatively indestructible, and change neither in size nor figure.

TENOTOMY OF THE TENSOR-TYMPANI.—Dr. Chas. S. Turnbull, of Philadelphia, gives an excellent translation of Prof. Joseph Gruber's paper on "Tenotomy of the Tensor Tympani," delivered at the meeting of the Society of Physicians in Vienna, Feb. 16th, 1873. In closing, he says that tenotomy can be successfully made upon the living without danger, when we consider the experience gained by the recital of his case, and it can assist in allaying subjective symptoms in disease.

As this operation is only undertaken in such cases where we are unable to do anything else, we must certainly regard it as an addition to operative otology, and must do our best toward its further development. —*Med. & Surg. Reporter.*

HEREDITARY SYPHILIS AMONG THE ABORIGINES.—Dr. S. P. Cutler, of Memphis, Tenn. (*Nashville Journal Med. & Surgery*), states that, in the Museum of the Med. Department of the University of Louisiana, Professor Joseph Jones has a collection of skeletons, implements of warfare, etc., from the mounds of Middle Tennessee. These are the remains of the mound-builders, whose history is entirely lost. There are about a dozen skulls, and most of the other bones belonging to them.

In that collection of bones, he noticed evident signs of constitutional syphilis, either hereditary, or induced —most likely the former. There were nine tibia, and five fibula, showing unmistakable evidence of the disease; spines of the tibia were quite extensively corroded, mostly the entire length. There were no evidences of the disease about the skull; the teeth, in particular, were perfectly natural and sound—no furrowing or pitting of enamel, which is sometimes noticed in hereditary disease, or even induced, during infancy. These facts, he thinks, show conclusively that syphilis is not altogether a creature of civilization.

PASSAGE OF MANY PINS, ETC., PER ANUM.—James L. Fite, of Lebanon, Tenn. (*Nashville Jour. Med. & Surg.*, June, 1873), reports the case of a child, three months old, who passed per anum without difficulty, within two days, twenty-eight pins, two needles, and an agate button. So far as he could discover the baby had never a pain from the effects of the pins, etc. It was thought that they were given to the baby by a little servant girl on the morning of the day the first pins came away.

VARIX OF THE DORSAL VEIN OF THE PENIS.—In the April number of the *Italian Journal of Venereal and Skin Diseases*, Dr. Francisco Parona narrates a case of a young man of thirty in whom, in consequence of a varicose condition of the vein on the *dorsum penis*, by facilitating the too rapid return of blood from the glands, erection of the penis was prevented. Equal parts of chloral and water were injected into the vein with a Pravaz's syringe, strong compression being made on the proximal side, a cold compress was applied, and a perfect cure resulted.

ABNORMAL OPENING IN THE OCCIPITAL BONE.—Dr. W. H. Lathrop, of Detroit, editor of the *Western Medical Advance*, publishes in his journal an interesting case of a child, which, at the time of its birth, in March last, had attached to the back of the head a tumor fifteen inches in circumference, connected by a pedicle about two inches in circumference. This tumor was caused by a protrusion through an abnormal opening in the occipital bone, the meninges of the brain entering into the walls of the tumor, as in spina bifida. In this case the brain itself passed into the opening to the extent of about an inch. The child died in convulsions 36 hours after delivery. The delivery was effected without instrumental interference; the woman (a primipara, aged 20) was so large and the child's head so small, that, although the face presented, the labor was allowed to take its natural course. The back of the head was pulled strongly backward by the tumor, which thus necessarily caused the face to present. After the head had passed through the external orifice, the tumor was delivered with the shoulders. Some difficulty was experienced in this portion of the delivery, but as traction was easily made upon the axilla, no exertion was required for the purpose by the mother. Spontaneous delivery in such a case would doubtless have been impossible but for the lengthening out of the pedicle, which permitted the delivery of the head by itself. The longest diameter of the unnatural opening was three-eighths of an inch.

Upon examination it was observed that the opening occurred at the "centre of development" of the occipital bone, as described by Gray.

CRANIOTOMY AND EVISCERATION.—Dr. M. M. Shearer, Assistant Surgeon, U. S. A., at Fort Wallace, Colorado Territory, reports to us an interesting case of the above nature. Being called by telegraph to the aid of a physician at Kit Carson, sixty-eight miles from his post, he found on arriving that it was to give assistance in the case of a primipara, twenty-three years old, of stout build and plethoric, who had been in labor seventy-two hours. She was greatly exhausted, had a weak "jerking" pulse, features pallid and pinched, cold perspiration, and she was vomiting a "coffee grounds" fluid. Ammonia and brandy were at once given, and an examination made. To use his own words:—"The membranous cyst had long since given way, and I ascertained the head, with an irregular presentation, solidly impacted in the brim of a pelvis below the ordinary volume. The face was directed to the promontory of the sacrum, the vertex, by pressure, extending below the brim—a most rare irregularity.

In this unfortunate position the cranium was immovably wedged.

"Adopting Ramsbotham's method of ascertaining the capacity of the pelvic brim, I obtained, as a result, conjugate 3¾ inches, lateral 4¾ inches, not the standard, but amply sufficient for the passage of a maturely developed child of ordinary size. The pubic arch, however, was exceedingly faulty, being narrow, deep, and angular. The rami were long, and close together; the symphysis deep. If the brim had been passed, delivery could not have taken place beneath this arch without the aid of forceps. In view of this latter fact—the utter impracticability of turning by hand—the absence of all instruments—and, above all, the exhaustion of the patient, I determined to practise craniotomy. Carrying two fingers of the right hand up the vagina, until they came in contact with the vertex, I made them sheath the cutting edge of an ordinary bistoury, which I introduced with the left hand. The point of the instrument entered the posterior fontanelle. I then incised two and a half inches forwards, through the sagittal suture, withdrew bistoury, and broke up the cranial contents with the handle of a common tablespoon. The broken-up mass came away with the succeeding pain the parietal tables lapped, and the head passed down, turning in its passage to the first position. Making a vectis of my forefinger I extracted below. Placenta came away forty-five minutes subsequently. Patient made a rapid recovery. Weight of child, 10½ lbs., well developed; sex, female."

Physiological Action of Phosphorus.—Wegner has performed a number of experiments on different animals to discover the effects produced upon the system at large when it is brought under the action of small and non-poisonous amounts of phosphorus. He failed to excite a malignant periostitis in animals whose limbs had been fractured and otherwise injured, and in which we might expect results analogous to the well-known affections of persons who are in the habit of inhaling the fumes of phosphorus. He found, however, that these small doses, given over a period of many weeks or months, had quite a different effect from large and poisonous doses. This was especially noticed (1.) in some of the digestive organs. In the stomach, for instance, the mucous membrane was the seat of hyperæmic infarctions and superficial ulcers, whose borders and surfaces were of a dirty brown color. Later on, this membrane became hypertrophied, hard, and assumed a smoke-brown color, which the microscope showed to be due to blood pigment. The glands were also lengthened, and the interstitial connective tissue increased. In the liver there was also an interstitial hepatitis, with an active proliferation of cells about the portal vessels. At the periphery of the liver-acini there was fatty degeneration of the liver cells, which were sometimes stained yellow from the escape of bile under the pressure of the contracting tissue. In fact there was found the interstitial hepatitis, which may lead to smooth induration simply, to acute atrophy or to granular atrophy (cirrhosis). Associated with these appearances were always icterus, venous hyperæmia of the stomach and intestines, and enlargement of the spleen.

(2.) Rabbits that were confined in an atmosphere impregnated with the fumes of phosphorus had necrosis of the jaw, which was essentially the same affection as the lucifer-match-maker's disease.

(3.) When phosphorus was given in infinitesimal doses the changes in the structure of the bone itself were remarkable. At those points in the extremities of the shafts where the cartilage forms the spongy tissue directly, the structure was found solid and compact like the ordinary dense tissue. If the animals continued to be fed with very small doses, the medullary canal was found to be encroached upon, but never occluded entirely; at least this was the case in dogs and rabbits, but in chickens that took phosphorus in their food, without lime, the canal was found to be sometimes completely obliterated.

The practical result of this latter experiment would seem to show that in such diseases as osteomalacia, rickets, etc., we should expect benefit from the long-continued use of phosphorus in very minute doses. At any rate, they were not found to do harm, and always developed remarkable energy in osteoplastic processes. The author also believes that it is phosphorus, and not its products by oxidation, to which this action is due. Perhaps its presence merely in the blood may act upon the bone-making tissues as a specific irritant. —*Virchow's Archiv, Schmidt's Jahrb.*, 4, 1873.

The best Form for Administering the Phosphates.—The great value of the phosphates as therapeutic agents in certain kinds of diseases has led Coirre to inquire into the best way of employing them, and especially one of the most valuable, the phosphate of lime. In order that this remedy may be readily taken up by the system, he recommends that it be given in doses of 10 grs. dissolved in ʒ ss. of water, to which a few drops of hydrochloric acid has been added. This latter represents the free acid of the gastric juice. It aids in the absorption of the phosphate, and is of itself useful, as in small doses it promotes digestion. Its use is indicated in diseases which cause disturbance of the digestive and nervous systems, such as chronic purulent discharges, chlorosis, tuberculosis (where calcification of tubercles may be desirable), and similar affections, in the osteomalacia of pregnant and nursing women, where the phosphate of lime is collected in the blood of the mother for the benefit of the child, but to her own serious detriment.—*Presse Med., Schmidt's Jahrb.*, 4, 1873.

Typhoid Fever from Infected Milk.—A recent outbreak of typhoid fever has occurred in London, in the parishes of Marylebone and St. George's, Hanover Square, very remarkable in its history and limitation. The number of cases is not exactly known, but amounts to several hundred. The families attacked belong, with hardly an exception, to the wealthier classes, and among them are those of well-known physicians and surgeons. The outbreak occurred in the third week of July, and the family of Dr. Murchison was among the earliest attacked. The doctor first directed his attention to the milk supply, and after an extensive examination it was discovered that the source of the poison was in one of the eight farms which supplied the milk consumed by the stricken families. Here not only were cases of typhoid fever in existence, but the water used for dairy purposes was contaminated with excremental and other matters.—*The Practitioner*, Sept.

Poisonous Effects of Tetramethyl of Ammonium.—At a late sitting of the *Society of Biology*, of Paris, M. Rabeauteau made some valuable remarks on the poisonous effects of the above salts, as illustrated by his experiments on animals. For instance, one-sixth of a grain kills a frog in less than five minutes. It is a muscular poison; the muscles of the heart are no longer excitable by electricity ten minutes after death. The iodide of tetramethyl is also a muscular poison of the same sort, less soluble but quite as dangerous.—*The Lancet.*

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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

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THE STUDY OF OUR CASES.

The young physician has always plenty of time to study up his cases. His patients are so few and so far between that he has abundance of opportunity for weighing the significance of the symptoms, and for learning the views of the authorities upon them. It would be well if the same opportunity could be enjoyed, and the same disposition could be fostered throughout the whole of his professional life. How different, however, are the circumstances which surround him when his practice increases, and he enjoys the confidence of the community to which he ministers. There is no calling which gives more uncertainty to time than that of a physician in active practice; no profession which in the conscientious discharge of its duties so openly defies any attempt at thorough and systematic study. Every one must acknowledge this as a fact, and be prepared to admit certain conclusions derivable therefrom. Accepting the situation, however—making every allowance for urgent calls, when the meal has to be left unfinished, when the much-needed repose has to be sacrificed, when, in fact, what would be considered the ordinary comforts of existence have to be laid aside to meet an emergency,—we have no right to make ourselves believe that we must not strain a point, must not snatch some time to consult our charts on our journeys. Our duties to our patients, to ourselves, and to our science demand that we do not give ourselves entirely to abstract business. We have no right to assume that, because so many draughts are made upon our time by our professional engagements, we can conscientiously excuse ourselves from a given amount of study.

We should have to imagine a very extreme case if we were ready to admit that any practitioner can be so driven that all the time he had to spare should be spent in eating and sleeping. *Per contra*, the very men who have done the largest practice are those who have been our best students. Not only have these gentlemen found time to study their cases, but have taken the chances in "the midst of the harassing and onerous duties that devolve upon a hospital surgeon, a teacher of surgery, and a private practitioner" (we quote from the preface of one of the best works on surgery written in our language)—have in the face of these drawbacks actually added to our stock of knowledge by writing volumes of their experience.

In this connection we call to mind the work performed by one of the greatest oculists the world has ever produced. We refer to this example at this time, not because it is unparalleled in its way, but for the reason that it is fresh in our mind from recent reading. In the current number of *Harper's Magazine* is an account of Albrecht von Graefe, by the talented "blind preacher," the Rev. William H. Milburn. It will be recollected that the reverend gentleman, before the death of the great oculist, went to Berlin to consult him concerning an operation; that an operation was performed, but without the success that was hoped. The story of blindness is told by one who for forty years has felt it, and carries with it all the interest which naturally attaches to a pathetic narrative from a gifted word-painter; but what interested us particularly, and pointed the healthy moral, was the following account of the life-work of the subject of the sketch:

"He was usually up by seven, passed an hour or two in study, then read and answered his letters while taking his coffee. Nine was the hour for his lecture at the klinik. . . . . The hour's lecture over, during which he held the great throng spellbound and even breathless by his eloquence, the death-like stillness broken now and then by irrepressible applause, he proceeded on his daily visit through the wards of his hospital. . . . . Some days there were as many as sixty to be operated upon. . . . . The operations were usually ended at 5 P.M., at which hour he professed to dine; but his swift horses rarely brought him to his house much before six. At dinner his buoyant spirits would break forth in charming talk, and all kinds of frolic and fun. Long before seven o'clock his anterooms were crowded by patients from all quarters of the earth, waiting for their preliminary examination. These were admitted one by one, each in his turn, to the cabinet, where the master patiently and carefully explored each diseased organ, and kindly, yet honestly, told the sufferer what he had to hope or fear. Thus was he occupied until ten or eleven at night, when the carriage was in waiting to bear him once more swiftly to the klinik, where he made a minute examination of every patient operated on that day and the day before. In my lonely vigils I used to hear his carriage bearing him away at between one and two in the morning. In addition to this daily round, how he found time for his private

studies, and the composition of his voluminous works, is more than I can tell; but time he did find to accomplish, as student and author, what would have made immortality for any other man, and at the same time to achieve such practical feats of skill, energy, and success as would be the full measure for a prodigy. Such was his life at Berlin for ten months a year, from 1850 to 1870, save when interfered with by sickness."

If we were to look around us we could find similar habits in many of our own great men, men who by just such work have made for themselves world-wide reputations not only as students but as authors.

But we cannot expect such work from every practitioner. We may allow, for the sake of the argument, that the degree of labor performed by these gentlemen is an exception to the rule which should be in general force, but some approach can be made to it by every medical man. He may not expect to advance our knowledge, but he can certainly make an effort to keep up with it. More than this, it is his duty so to do. Even if he cannot find time or opportunity to go into the alluring by-paths of investigation, into the fascinations of extended research, he can at least make a note of what is daily passing before him, and work up the material which by the very circumstances of his practice is placed directly before him. The ordinary study of one's cases is the simplest manner to perform such a duty. As far as any system is concerned, each one should create one for himself, governed entirely by the requirements of the case.

A great deal can be learned by experience, but this can be made more than doubly valuable by a reasonable amount of study and reading. A want of a due appreciation of this fact begets shiftlessness in thought, uncertainty in diagnosis, and degenerates practice into a humdrum business in which mere dollars and cents is the only consideration for so many visits.

The practice of medicine followed as a mere business, is the meanest of all vocations; but cultivated as a science, is a fascination. The medical man who never studies his cases, who cares only to recover his patients and collect his bills, who bothers himself but little as to a correct and thorough diagnosis, who does not seek to explain the significance of an anomalous symptom, moves in an atmosphere of distrust created by himself, and denies himself of all that invigorating satisfaction which is always the reward for solving a difficult problem. We maintain that there is nothing which gives a real relish for the drudgery of our profession akin to that which one acquires by a thorough study of individual cases. Once develop a real interest in a case, and we lose sight of the abstract work.

We once heard a celebrated teacher say that the pleasantest hours he spent were those in which he could arrange his cases in memory and talk them over with the authorities on his library shelves. Every practitioner who would adopt a similar plan would find it equally pleasant and profitable, and the one who denies himself such experiences has something yet to learn.

THE BRITISH MEDICAL ASSOCIATION.

It would seem that in the matter of management the British Medical Association is not very unlike a similar organization of our own. We quote the following extract from an editorial on the recent meeting in London, published in *The Doctor*, a leading journal of that city:

"It was remarked to us by those who sat near, that the arrangements were evidently intended to stifle discussion, and scant courtesy was shown towards those who offered any remarks on the management of the Journal, the proposed alteration in the laws, the report of the reform committee, or the finances of the Association. It was patent to every one that the wire-pullers have no idea of representing the profession, except through themselves, and they therefore openly manipulate the members in order to retain their position."

The Journal in question is one which seems to be run entirely under the patronage and in the interests of the Association; but it would seem that none but the wire-pullers have any right to be acquainted with details. Our Association does not yet own a journal, but it has a strong desire in that direction.

In other respects, concerning the management question, the American Medical Association can enlighten our cousins, and can show them how it is possible to take a step further still and claim to be representative. Our Association does not seem to have any wires to pull; it is simply led by the nose.

THE STATE MEDICAL SOCIETY AND THE PUBLICATION OF ITS TRANSACTIONS.

Some months since we informed our readers that the New York Legislature had refused the usual annual appropriation for printing the Transactions of the State Medical Society, and expressed the opinion that it would be a blessing in disguise, in that it would stimulate the members to action in their own behalf. We then advised that the Society should publish its own Transactions, and be entirely independent of State patronage. We are pleased to hear that the Medical Society of this county has re-echoed this sentiment by a resolution published in our news columns. It is to be hoped that the other county societies will follow its lead, and adopt suitable measures to insure the publication of the annual volume in time for distribution at the next meeting in Albany.

THE CHOLERA IN NASHVILLE AND DR. PETERS.

In the item headed "Cholera in Nashville," published in the last number of The Record, certain statements appear, the intention of which not being understood, reflect unpleasantly upon our friend and fellow-towns-

man Dr. J. C. Peters. By an accidental omission of quotation-marks, it would appear that we indorsed the statement that the gentleman was a fabricator, and one liable to draw upon his imagination for scientific data. It is unnecessary for us to say that we have the fullest confidence in the statements of Dr. Peters, and believe, as we always have done, that he is honest in his convictions and above the suspicion of any attempt at making up cases to prove his point. As far as the questions of scientific fact are concerned, we offer no opinion; but as far as their statement by Dr. Peters is concerned, we are satisfied that they were founded on a conscientious conviction of right.

Reviews and Notices of Books.

CLINICAL REPORTS FROM PRIVATE PRACTICE. By JOHN HERBERT CLAIBORNE, A.M., M.D. Petersburg, Va.: Jos. Van Holt Nash. 1873.

THE author says, rightly, that "No class of medical writing is of more interest and more avail to the majority of professional readers, than correct and well-digested clinical reports," and refers to the timely and valuable aid he has derived from the works of Bedford, Elliot (spelled by him with two t's), Neligan and others. It was the appreciation of this fact that gave us anticipations of pleasure on opening this elegantly gotten-up book of Dr. Claiborne's. The author avers that for many years past he has kept a record of cases with a view to their publication when time and experience would justify him in giving them to the public, and he now offers us something over a hundred and forty selected ones, with the promise of more if these meet with the appreciation and approval of the profession.

Almost the first thing that catches our eye is the atrocious character of the English used in the work, and this is even outdone by the medical Latin. Coming as it does from one who suffixes an A.M. to his name, and who says, "In reference to the style of what he has written, the author, while acknowledging that no one has the right to palm off on the public, with any sort of apology, crudities and solecisms, the result of ignorance or carelessness," seems to think his shortcoming in this matter is quite excusable on the ground of the cases having been "collected, condensed and rewritten at night after the fatigues and interruptions of a most exacting practice—and chiefly in hours robbed from sleep,"—we would modestly suggest that this can hardly excuse such a wholesale omission of prepositions, such naming of preparations that do not exist in our own or any other pharmacopœia; such grammar as makes him say on page 24 that twelve American leaches were ordered to have a warm sitz-bath; such mistakes as puts an abbreviation for nitric acid where one calling for simple water should be; as makes chloras. potass. the Latin for chlorate of potash, or writes hyd. mit. chlor. as the abbreviated Latin name for calomel.

There is hardly a page of the book that does not give evidence in its orthography, punctuation, grammar, nomenclature, etc., that he must have been very sleepy not only who wrote it, but when the proof was read.

The author says: "The 'cases' recorded in these pages will be taken from a very different class of people from those who ordinarily constitute the subjects of clinical reports. Such reports are usually made up of the histories of the cases of applicants at hospitals, infirmaries, dispensaries, college clinics, and other public charities—applicants whose constitutions have been enfeebled by the privations of poverty, or broken by vice and debauchery," etc., and he "*suspects, greatly*, the majority of people in this land . . . who employ physicians for a fee, and who do not resort to the public charities for medical advice, are represented truthfully by the class he describes;" which may be all very well in its way, but does not alter the fact that it is mainly by the careful observation and recording of such "charity" cases that medical science is being advanced; and to this rule Dr. Claiborne's work affords no exception, despite the respectable character of his patients, since the remark appended to Case xi., "Pathology uncertain, but treatment effective," might as well be employed in numerous other instances. Indeed, the treatment is almost invariably so effective that one is led to suspect that too much "selecting" has been done in the choice of cases.

The loose way of making a diagnosis renders some of the cases reported absolutely worthless. For example, Case vii., of "Azoturia;" Case xv., which the author mentions as one of Bright's disease recovering under treatment, but which presents no diagnostic symptoms of this affection; Case xxii., of "Acute Ovaritis," which might just as well have been called constipated bowels; Case xxx., of Hepatitis, which might have been one of pleuritis or peri-hepatitis complicating pleuritis, for all that we learn to the contrary; and Case xxxi., of "Weed," which seems to us quite as likely one of threatened mammary abscess.

Under the term "Cholera Infantum," the writer designates all the summer diarrhœas of the first three years of life; and in the dozen or so of cases of summer diarrhœa which he has selected, he cuts the teeth of the baby more times than physicians whom we know have had occasion to do in a practice of several years, almost exclusively among children, and averaging over fifty a day during summer months.

Dr. Claiborne makes no mention of having used pepsine in any form in the bowel affections of infants, but has an evident regard for the virtues of calomel, which is the result of years of use. Oxide of silver is, in his hands, a potent remedy in cases of menorrhagia, and he looks with great disfavor upon the growing tendency to employ the obstetrical forceps.

Finally, to return again to the preface, the writer says: "In my experience, one of the first and most important lessons to be learned by the young practitioner, after leaving the clinics of the schools and the wards of the hospitals, is to know how to discern between the physical and moral condition of the patients whom he meets for the first time in private practice, and of those whom he has left behind him. His success will depend no little on the skill and discrimination which he exhibits in changing his practice with the changed conditions and relations of his patients." In other words, to acquire the *art* of practising medicine. This, judging by the book before us, Dr. Claiborne has done, and we have no doubt that he is possessed of that *savoir faire* which makes the successful practitioner; but as for his ability as an accurate and reliable observer and writer on medical subjects, we question very much if his efforts will prove as successful. We cannot finish without complimenting the publishers upon the exceptionally elegant manner in which their work is done.

REPORT OF THE COLUMBIA HOSPITAL FOR WOMEN, AND LYING-IN ASYLUM, Washington, D. C. By J. HARRY THOMPSON, A.M., M.D., Surgeon-in-Chief. With an Appendix. Washington: Government Printing Office. 1873.

A CAREFUL survey of this work shows it to be about the best example of "padding" that has come to our notice. A few fairly-reported cases are made the excuse for a mass of excerpts from well-known and frequently-consulted authorities, and we cannot avoid the impression that, under cover of the annual report of a hospital sustained by the General Government, the reporter has done his best to win notoriety at public expense.

The book is published in the style of the *Medical and Surgical History of the Rebellion*, and comprises over four hundred pages, profusely illustrated with cuts, many of which are taken, without acknowledgment, from such text-books as Tyler Smith's Lectures on Obstetrics, etc.

Who J. Harry Thompson is, that he should have been selected as a recipient for official favor by being advertised in such an elegant manner, we know only from the work itself and from an advertising circular of an institution called the College of Obstetrics and Gynæcology, Washington, D. C., which has been kindly furnished, no doubt in anticipation of such necessity. We feel that the publication of such a work by the General Government is not only uncalled for, but positively wrong, when the progress of the *Medical and Surgical History of the Rebellion* is delayed for want of funds.

In the preface it is boasted that gratuitous medical and surgical relief has been furnished to at least twenty per cent. more patients, in proportion to the fixed population, than are relieved at the hospitals of New York, Philadelphia, and other large cities. As it is well understood that the abuse of medical charities in our large cities is the source of just complaint on the part of young and struggling physicians, we do not envy the officers of this institution the opinion in which they must be held by the medical men of their neighborhood.

The Appendix purports to contain reports of the Department of Diseases of Children and the Department of Diseases of the Eye and Ear. The former comprises seventy-eight pages, of which *one* page only is essentially a report of the doings of this department. The balance is made up of three articles by Dr. Samuel C. Busey on Febris intermittens, Entero-colitis, Cholera infantum, Dysentery, Difficult Dentition, and the value of certain drugs in bronchitis, none of which papers have any necessary connection with the report of a public institution, but which in a very much abbreviated form would have answered as magazine articles.

The same remarks will apply to the so-called Report of the Department of Diseases of the Eye and Ear. Twenty-five pages are devoted to some remarks by Dr. D. Webster Prentiss on herpetic keratitis and trachoma, which, so far as they contain anything original, might all have been taken from some text-book, and about two pages are devoted to a report proper.

The whole work is evidently intended more for the class who usually receive Congressional favors in the way of Public Documents, than for members of our profession generally.

CIVIL MALPRACTICE: A Report presented to the Military Medical Tract Society at its Fifteenth Semiannual Meeting. M. A. MCCLELLAND, M.D. Chicago: W. B. Keen, Coke & Co. 1873. 8vo. pp. 74. $2.00.

THIS little work, although it by no means gives over a tithe of the medico-legal questions of interest to the physician, does, nevertheless, comprise a well-condensed statement of the questions involved in the greater proportion of suits for malpractice, and quotes a number of typical cases, some of which have the charges and rulings of the courts in full.

It is divided into two principal portions, in the first of which the terms "negligence and skill" are treated from a legal, and in the second from a medical, standpoint. There are in both numerous citations of ancient and modern authorities, and the book concludes with a list of the reputable works on medical jurisprudence.

In the dearth of instruction in our medical schools regarding the legal responsibilities of medical practitioners in the discharge of every-day duties, the advent of a work so convenient and comprehensive as this is a source of congratulation for both students and practitioners.

A GUIDE TO URINARY ANALYSIS, for the Use of Physicians and Students. By HENRY G. PIFFARD, A.M., M.D., etc. New York: William Wood & Co. 1873. pp. 88.

THIS is a carefully written and well-arranged handbook of urinary analysis, by what is known as the "approximative method," or that performed by means of standard solutions, the amount of the various substances being estimated by the bulk of their precipitates. Though scarcely so accurate as the methods which would be employed in a laboratory, it is practically the one most available to the class for whom the book is written, and is sufficiently exact to answer all clinical purposes; its chief recommendation being the shortness of the time required for making an examination.

The apparatus to be employed is well illustrated, and the formulæ for the test-solutions, and tables to aid in estimating the percentage and weight of the different substances, are introduced.

Correspondence.

THE INVENTION OF TUNNELLED URETHRAL INSTRUMENTS.

A LETTER FROM PROF. J. W. S. GOULEY, M.D.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—It is well known to the profession in the United States that I have, since 1864, claimed to be the inventor of tunnelled urethral instruments, and that this claim was never disputed until 1870. As long as these instruments were, by some persons, considered of little use, not a word was said about their authorship; but the moment their success was firmly established, and that practitioners in New York and in other cities recognized their value, the invention was claimed on behalf of Dr. W. H. Van Buren, who himself has twice acknowledged to me that he had never laid any claim to the invention, and who had nothing to do with it, even by way of a suggestion.

I have remained silent, in spite of the several attacks that have been made upon me, in obedience to the urgent request of Dr. Van Buren; but as the subject has lately been reopened—and assuredly not by myself—I feel compelled in justice and self-defence to break this long silence by giving a succinct account of the

history of the invention of tunnelled urethral instruments, which I have the honor to submit to the judgment of the profession.

My attention was called in January, 1870, to a paper on stricture of the urethra, by Dr. Bumstead, published in *The American Practitioner* for January, 1870, in which the author attributed to Dr. Van Buren the invention of tunnelled sounds, with the full knowledge that I had claimed it in two publications in 1869, and without giving me or my friends the opportunity of making any statement on the subject. I then called upon Dr. Van Buren, requested him to read the article, and asked him if the remarks relating to tunnelled sounds were made on his authority. He replied in the negative, said he had never claimed to be the inventor of these instruments, and promised to correct the error (or what I thought at the time might have been an error on the part of Dr. Bumstead). But as the same appeared in a new edition of Dr. Bumstead's book a few months after, I addressed a letter to Dr. Van Buren, of which the following is a copy:

"NEW YORK, November 19, 1870.

"To W. H. VAN BUREN, ESQ., M.D.:

"MY DEAR DOCTOR:—There appeared in *The American Practitioner*, vol. i., No. 1, January, 1870, a paper on the treatment of stricture of the urethra, etc., by Dr. F. J. Bumstead—a copy of which I sent you soon after its publication. In this article Dr. Bumstead alludes to one of my devices for catheterism upon a conductor, attributing the same to you as follows: 'One of these inventions, original, I believe, with that eminent surgeon, Professor W. H. Van Buren, M.D. . . . . .' The same expressions are used at page 283 of the third edition of his book, which has just been issued. I do not know upon what evidence or authority he persists in this course. The first instance might have been a mistake, an oversight; not so the last; for the Doctor reads, and he must have noticed the direct claim I made to the invention in my lecture published in THE MEDICAL RECORD, March 15, 1870. He also read the description of my retention catheter (based upon the tunnelled sound), published in THE MEDICAL RECORD, May 15, 1869; *The Lancet*, June, 1869; *The New York Medical Journal*, August, 1869, and reprinted in pamphlet form. This article describes an instrument of *my own*, and no one else is mentioned in connection with it. *Had I borrowed the idea* from you, I should have been happy to *acknowledge* it. You have never, to my knowledge, made any *public* claim to the device, nor have you done so *privately* to me. After our conversation of last Winter, about the remarks in Dr. Bumstead's paper, I said no more to you upon the subject, as I hoped that you had *corrected the mistake*; but it is now clear that you have either *forgotten* to do so, or, if the error was rectified by you, it has been overlooked by the author in question. Nevertheless, in the minds of those who read the book, by this oversight of a 'small matter,' I stand in the light of a plagiarist. Whether the question of priority is a 'slight affair,' or the instruments and the method are good or bad, is not the point at issue. I have *asserted*, and do now *maintain*, that they are mine, and *no facts* have been adduced to *disprove* my claim. Bald statements are made, but such dicta are not usually accepted in argument and in science. *Your denial of any right to the invention will settle the point.* I am not willing to stand accused (though by implication) of a breach of trust, however small, toward my preceptor or any one else, without defending myself. *Had I not made my claim public, I would most cheerfully yield to you*; but it is now too late. Let me remind you of your connection with the *construction** of the first tunnelled sound.

"I remember well what passed between us when we conversed, one evening in January, 1864, on the topic of difficult catheterism. You informed me that you had a patient suffering from stricture of the urethra, with false routes, which prevented the passage of metallic sounds, but that English filiform bougies could be introduced into the bladder. I then told you that *I had an idea of using such small instruments* as conductors for steel or silver sounds, *each opened at the vesical extremity, and having a short canal* for the lodgment of the minute guide; and that thus false passages might be avoided and dilatation carried on by means of larger instruments of the same sort and on the same principle. I even drew a rough sketch of such a sound, *and asked you* to have it made at Tiemann's. Expecting soon to leave town, *I could not go myself* to give the order. On my return you showed me the instrument made by Tiemann & Co., which perhaps you still have in your possession. You tried it, *but thought it would not do.* I also used it a few times, and found the canal entirely too long; the instrument was altogether so clumsy that it was set aside.

"*I afterwards went* to Tiemann's and *gave directions* for an improved pattern. Several were made during the Spring and Summer, *but I rejected them after trial*, and it was not *until November* 30, 1864, that I received from Messrs. Geo. Tiemann & Co. a properly made instrument which fulfilled the intended indications. *I subsequently named it the tunnelled sound*, and gave the account already referred to. *I have since adapted the same principle* to the English flexible catheters made by Eshman, of London.

"*There has been ample time for reclamation, but none* save Dr. Bumstead has seen fit to speak.

"Now, my dear doctor, that I have stated what I believe to be the truth in this matter, will you be *so good as to set it right* before the profession?

"Hoping soon to hear from you,

"I am very respectfully

"Your friend and obedient servant,

"J. W. S. GOULEY."

This letter, which I endeavored to write clearly in order to avoid any misunderstanding, required a categorical answer, yes or no. Yes, the invention is mine, and I do claim it; or No, it is not mine, and I have not claimed it.

But the doctor did not quite understand some portions of the letter, and avoided committing himself, one way or the other, on paper, and asked me, nine days after the date of my letter, to come and have a talk with him.

The subjoined is a copy of his letter:

Nov. 28th.

"DEAR GOULEY:—I have not been able to get at the meaning of some portions of your letter of the 19th inst., and would be very glad to have some light from you on the subject.

"Can you not step in and see me about it? I was in the country the greater part of last week, and have but just returned.

"Yours truly,

(Signed) "WM. H. VAN BUREN."

I complied with Doctor Van Buren's request, and went to see him. He then repeated to me that he had never claimed to be the inventor of tunnelled urethral

* Construction, not *invention*.

instruments. He did not state that he had, or had not had, any communication with Dr. Bumstead upon the subject, but was very urgent that I should abstain from writing to Dr. Bumstead. He (Dr. V. B.) evidently wished to avoid a controversy; in fact, he finally said so.

Our relations had always been of such a cordial nature that I yielded to his request, and for old friendship's sake I let the matter drop, and would perhaps never have taken it up, but for the publication of the following communication in the *Lancet* of July 12th, 1873:

"TUNNELLING THE END OF URETHRAL INSTRUMENTS.

"To the Editor of The Lancet.

"Sir:—Whatever may be the value of 'tunnelling the end of urethral instruments,' as described by Mr. Teevan in the last number of *The Lancet*, and attributed by him, as it has been by others, to Professor Gouley, of New York, the credit belongs to that eminent American surgeon, Professor W. H. Van Buren, and not to his former pupil, Professor Gouley. Professor Van Buren had made, and was in the habit of employing, instruments constructed upon this principle many years ago, and prior to the time when Doctor Gouley first became a student of medicine in his office.

"This statement of the authorship of the invention was made to the writer of these lines by Professor Van Buren himself.

"I enclose my card, and remain, Sir, yours faithfully,

"Honor to whom Honor is Due.

"July 7th, 1873."

A few days after reading the above, I sent to the editor of *The Lancet* the annexed letter:

"56 West 28th Street, New York, August 9th, 1873.

"TUNNELLING THE END OF URETHRAL INSTRUMENTS.

"To the Editor of The Lancet.

"Sir:—I beg leave to state that the communication to *The Lancet* of July 12th, 1873, page 63, bearing the above title and signed 'Honor to whom Honor is Due,' contains misstatements which I desire to correct.

"1. I never was 'a student of medicine in Dr. Van Buren's office.'

"2. Dr. Van Buren had never seen tunnelled urethral instruments until I made them known to him.

"3. Dr. Van Buren stated to me, early in 1870, that he had never claimed to be the inventor of the tunnelled sound or of any other tunnelled urethral instruments.

"I have the honor to be, very respectfully,

"Your obedient servant,

"J. W. S. Gouley, M.D.,

"Surgeon to Bellevue Hospital, etc."

The writer in *The Lancet* of July 12th, 1873, who signs himself "Honor to whom Honor is Due," asserts that Professor Van Buren had made, and was in the habit of employing, instruments constructed upon this principle many years ago, and prior to the time when Dr. Gouley first became a student of medicine in his office. But I never was "a student of medicine in Dr. Van Buren's office." I was a student of medicine visiting the medical and surgical wards of Bellevue Hospital (in 1851 and '52), where I first met Dr. Van Buren and made his acquaintance. After my graduation (1853) I became an interne at Bellevue Hospital, and have since always spoken of the attending physicians and surgeons of the hospital, whose clinics I attended faithfully, as my teachers, or preceptors; surely I listened to their teachings, their precepts, therefore I was their pupil. Dr. Van Buren was at that time (while I was externe and interne) one of the attending surgeons of the hospital. He has, ever since, taken especial pride in calling me his old pupil, and I have called him my preceptor; but I never was "a student of medicine in his office." It is evident that "Honor to whom Honor is Due" means to say that Doctor Van Buren had used "instruments constructed upon the principle" of my tunnelled sound before he (Dr. V. B.) knew me.

If Dr. Van Buren had ever devised or used instruments constructed upon this principle, for the treatment of urethral stricture or for any other purpose, prior to 1851, it is strange indeed that he should not have made them known in some way or another, for he was then young and ambitious, and his asserted invention would have been noticed and tried by others, who would doubtless have given him due credit. But there is no printed record that Dr. Van Buren had ever invented anything like a tunnelled sound. If he had done so, and had any motive to conceal the fact, he now deserves great censure for withholding from the profession a device which has proved so efficient in relieving the sufferings and saving the lives of so many men. But where is the evidence that the invention was made before Dr. Van Buren knew me, or before I became a student of medicine? Though not "a student of medicine in Dr. Van Buren's office," no one has had better opportunities than myself (from 1851 to 1868) to know what the Doctor has done in surgery, both in public and in private practice. While I was associated with him in the Anatomical Department (Demonstrator of Anatomy) of the University Medical College, I assisted him in nearly all his surgical operations, and have done so until 1868 (two years, 1861 and 1862, excepted); but, during all these many years, he never once made mention to me of having invented anything like tunnelled urethral instruments, nor did I ever see him use any such instruments. Never until January, 1864—when I spoke to him of my invention and explained it to him—had he thought of it, for he then said that the idea was entirely novel to him, though he questioned whether it could be carried out.

Dr. Van Buren has never published a word about tunnelled urethral instruments, or anything bearing the slightest resemblance to my tunnelled sounds. (See his Clinical Lectures on Stricture, in The Medical Record, vol. i., 1866; his paper on Stricture, in *The New York Medical Journal*, December, 1868.)

During "our friendly talk" in November, 1870, Dr. Van Buren treated the question of priority as a "small matter," and said it made very little difference whether the invention was attributed to himself or to me. But he still said that he had never claimed it. Considering that he had "never claimed" this "indifferent small matter," he did not offer to yield to me, as I said I would cheerfully have done to him if I had not already made my claim public. In the Spring of 1869 I read to Dr. Van Buren, from my manuscript, all that is contained in my pamphlet of August, 1869; he listened with great attention, and never made the slightest claim to my devices, but gave the whole his unqualified approval.

In his paper on the Treatment of Stricture, published in *The New York Medical Journal* for December, 1868, Dr. Van Buren never made the faintest allusion to tunnelled urethral instruments, though he gave what he then supposed to be the most advanced views and the most recent improvements in the treatment of

urethral stricture. Had he then considered his the idea, or even the suggestion, of the tunnelled sound, he would naturally have made some reference to this instrument.

Ever since 1864, I have been in the habit of using the tunnelled sound at my public clinics and in private practice, and no one, until 1870, has ever questioned that the invention was mine.

By referring to chapters 3, 4, 5, 7, and 8 of my recent work on Diseases of the Urinary Organs, and to the illustrative cases (most of which were published in THE MEDICAL RECORD in 1870) appended thereto, the reader will readily see by the dates of the operations that no such method was ever before made known to the profession at large.

Catheterism upon a conductor is of ancient date. I have traced it back to Desault, and have so stated in one of my published lectures and at page 54 (footnote) of my book.

I am not indebted to Dr. Van Buren for a single suggestion in the invention or construction of the tunnelled sound, but I do owe something to an English surgeon, Mr. Wakley,* for it was after reading an account of his method of catheterism upon a conductor that I was led to devise my own simpler instrument, the tunnelled sound, and it gives me much pleasure to make this acknowledgment.

56 WEST THIRTY-EIGHTH STREET, NEW YORK,
September 10th, 1873.

THE CARE OF FOUNDLINGS.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR:—The publication in THE MEDICAL RECORD of Sept. 1st, by Dr. Foster, of "A Minority Report on Foundlings and Foundling Asylums," reminds me of a failure on my part to perform a duty naturally belonging to the chairman of the committee appointed by the State Medical Society for the purpose of investigating the subject of foundlings and foundling institutions. I hasten, therefore, to request you to insert a very brief addition to the former report of that committee which has appeared in full in THE MEDICAL RECORD of Nov. 15th, 1872. This addition was read before the State Medical Society on the second day of its meeting, at Albany, in February, 1873.

In referring to THE RECORD of February 15th, I find the following report: "Dr. A. Jacobi, of the Committee on Foundling Asylums, which was continued from the previous year, made the final report, and Dr. Joel Foster, who was last year added to the committee, read a minority report. The former was accepted by the Society, and adopted as an expression of their views on the subject."

As far as I know, the final report of the committee has never been printed, except in a single medical journal. At all events THE RECORD, after having given due attention and ample space to the subject of foundlings, never contained that paper. While I plead guilty to my neglect in not communicating to you the final report, I still hope you will insert, at this late hour, the conclusions arrived at in the former extensive report and in this addition. Your readers will find no difficulty in deciding upon the merits of both the reports of the committee, carefully prepared in the course of a few years, and the "few remarks on the subject hastily offered," which Dr. Foster publishes as "A Minority Report."

Yours, very respectfully,
A. JACOBI, M.D.,
Chairman Committee on Foundlings and Foundling Institutions.

NEW YORK, Sept. 9th, 1873.

REPORT.

Two years ago, this Society appointed a committee consisting of Dr. White, Buffalo; Dr. Dean, Rochester; Dr. Th. Hun, Albany; Dr. Hutchison, Brooklyn; and Dr. Jacobi, New York, to investigate and report, in the meeting of 1872, upon the following subjects:

1. The causes of the fearful mortality of abandoned infants in general, and those in large public institutions in particular.

2. The reasons for the giving up of large institutions, and the success of the dispersing system for abandoned infants in every country of Europe, where the preservation of lives was an object.

3. The causes of the unusually large infant mortality in the institutions in charge of either public or self-constituted authorities in New York City and State.

4. The plans and means for improving the condition of foundlings and abandoned children in New York City and State—

a. During their infancy, when they are most subject to disease and death.

b. During childhood and adolescence, when they require an education sufficient to make them useful members, and prevent them from becoming enemies of and dangerous to society.

That report was presented here a year ago. When parts of it, and the final conclusions of the same, had been read, it was, after a short discussion, resolved to accept the report, to continue the committee, and to add the name of Dr. Joel Foster, New York, who had participated in the discussion and appeared to promise valuable contributions to its working and results.

The committee again appears before you to claim your attention, this time for a few minutes only, but for some final expression of your appreciation of its motives and endeavors.

The report was published in THE MEDICAL RECORD of Nov. 15th, 1872. Thus it has been before you for some time, and may have been read by not a few. Those who have read it, we fully believe, will feel as positive as we do of the absolute conclusiveness of the final results of our investigations. Those who have not read it, are well prepared by their knowledge as medical men, and their sentiments and convictions as practical humanitarians, to judge of their merits. Thus we again submit to you the conclusions of the report of last year for your adoption and support.

They read as follows:

"In accordance with the facts and conclusions contained in this report, which we have the honor of presenting to the Medical Society of the State of New York, we desire to propose the following:

"That the life and health of every infant is, both economically and morally, of paramount importance to society and to the commonwealth:

"That it is the duty of society and of the State to grant every infant the possibility of living and obtaining an education:

"That it can under no circumstances free itself of its responsibilities by throwing them upon private individuals; but should take care of every infant deprived of its parental protectors by death or incompetency:

"That science and experience have united on certain principles to be observed in the raising of the young:

* Diseases of the Urinary Organs, by J. W. S. Gouley, page 54, footnote.

"That human breast-milk is more appropriate than artificial food; the country more wholesome than a large city; and an inferior private dwelling better adapted than a large, overcrowded institution, to the raising of an infant:

"That the practice of uniting lying-in asylums with infant asylums or hospitals is a direct source of dangerous disease and fearful mortality:

"That the accumulation of many infants under one roof, under the best possible circumstances, and with as gentle care as is observed in New York State and City, is conducive to ill-health and unavoidable mortality; this system having been given up in Europe for this very reason:

"That according to the statistics of our own large infant asylums, especially the Infant Hospital, under the charge of the Commissioners of Public Charities and Corrections; the Catholic Foundling Asylum, under the charge of the Sisters of Charity; and the Nursery and Child's Hospital, under the charge of a Board of lady managers—all in New York City—their infant mortality is immense, and equal to the mortality of the large foundling hospitals of Europe before a radical change in their system of management was instituted:

"That the necessity of distributing abandoned infants among private families, especially in the country, is urgent:

"That the Medical Society of this State recommend such a change in the manner of caring for abandoned infants:

"That the State should see that this change be made as speedily and fully as possible, by all the public and self-constituted authorities concerned in the care of foundlings; inasmuch as it has positive responsibilities towards every member of society in general and the young and feeble in particular:

"That, however, the State should not interfere with private charity towards foundlings, so long as the interests of the infants and the Commonwealth are not injured:

"That the State ought not to be held responsible for expenditures not incurred by itself nor under its own control; that private charitable societies should not assume duties beyond their own means; and, in particular, that, while private charity and enterprise must be encouraged, private ambition and officiousness must not be indulged in at the expense of the taxpayers:

"That therefore, when private individuals or corporations ask the Commonwealth for permission to administer charity on a large scale, under the rules and regulations of a charter, this permission and charter does not involve that the State should be tributary to such individuals or corporations:

"That, as medical men and citizens of the republic, we are of the opinion that the maintenance of large institutions for the care of foundlings, by the payment to them by the State of eight dollars per head per month, is not productive of good results:

"That the probability, or possibility, of frequent changes in the administration of such institutions, which are, moreover, liable to be placed under the charge of persons whose qualifications for the solution of questions of the greatest difficulty and importance is frequently doubtful, is a source of great danger to both the infants and to the Commonwealth:

"That the supervision and control of all the abandoned infants of the State belongs alone to the State; no matter whether they are sustained by the State, or by private individuals or corporations:

"That we see in such supervision and control no unrepublican centralization, but the performance of a duty of the Commonwealth towards the feeble and dependent young."

Your committee recommend that the conclusions of their report be adopted by the Medical Society of the State of New York, as best adapted to the requirements of humanity and science, and laid before the legislative body of this State as the expression of its views.

We might go further and say that we, citizens and taxpayers, protest against squandering our and the people's means on institutions gotten up, indeed, in good faith and for laudable ends, but abortive in their results, dangerous through their effects, and destructive both to the public treasury and the life of the young. Year after year time and efforts of both individuals and corporations are spent in the attempt at obtaining a large share of the public income for private charitable, or so-called charitable, institutions. All of us who have studied the list of such establishments as participate in the bountiful distribution of public funds, know with pangs of sorrow and disgust that this distribution, in many of the items, is injudicious, and better adapted to serve private ends than the requirements of charity or the public good. We do not pretend to legislate for the consciences of our legislators as elected by the people, but we insist upon public resources not being deereed away upon the recommendations, pleadings, and lobbying of private individuals. We insist upon our voice being heard in those matters which we, strengthened by our knowledge of the scientific facts, and by a careful study of the results of both scientific and unscientific experiences, believe to understand better than those who, not fortified by knowledge, are easily misled by sentimental representations and high-phrased eulogies of alleged or supposed charity. At all events, we insist upon the State Board of Charities, or another appropriate and well-informed Board, to have full power to investigate the claims of those who mean to thrive at the public expense, or pretend to carry the load of public duties on private shoulders. And we beg and pray that the Legislature of this State may not forget that the taxpayers in the community may be remembered when public funds are distributed broadcast in mistaken liberality, and that the earnest humanitarians will never be the importune leeches of the treasury. And we also beg that when the claims of private persons or societies are considered valid, because of the praiseworthiness of their undertaking, before their requests be granted and large amounts of public funds legislated away, the question be answered, if those amounts are, or are not, in an undue proportion to the results promised, claimed, or obtained.

All of which is respectfully submitted, and, together with our report of last year, recommended for adoption.

Dr. Thomas Hun, Albany,
Dr. White, Buffalo,
Dr. Dean, Rochester,
Dr. Hutchison, Brooklyn,
Dr. Jacobi, New York,
Committee.

Medical Items and News.

Medical Society of the County of New York.—A meeting of the Society was held on Monday evening, September 22d. Professor E. M. Moore, of Rochester, President of the State Medical Society, was present by invitation, and a paper was read by Professor Austin Flint, Sr., on "The Tolerance of Diseases."

Prof. Moore made some remarks upon consecutive dislocation of the radius and ulna backwards, for the purpose of asking the experience of members upon the subject. He had not been able to find any account of the occurrence in the books; but as the result of persistent inquiry three cases of the sort had been given him. That such a thing was possible, he was enabled to prove by direct experimentation, in one case which had been under his care. In a word, he had found that the patient, being under ether, and the dislocation reduced by allowing the limb to drop to an angle of 130°, both the forearm bones slipped very easily backwards. He did not, however, say whether the coronoid process had been broken in this case.

The following gentlemen were nominated to hold office during the ensuing year, the election to take place at the next stated meeting:—

For President—Ellsworth Eliot, Frank H. Hamilton, John C. Peters, Henry B. Sands, T. G. Thomas.

For Vice-President—Henry B. Sands, John C. Peters, Robert A. Barry.

For Recording Secretary—Alfred E. M. Purdy.

For Corresponding Secretary—F. A. Castle.

For Treasurer—Jos. E. Janvrin.

For Censors (five to be chosen)—H. F. Hanks, S. Caro, A. H. Smith, G. M. Smith, R. J. O'Sullivan, T. C. Finnell, James Ross, H. P. Farnham, M. H. Henry, John C. Peters, A. Jacobi, J. J. Crane, J. S. Monell.

For Delegate (to serve for one year to fill a vacancy)—R. A. Barry, L. de F. Woodruff, F. A. Castle, W. B. Wallace, W. L. Richardson, Geo. Bayles, E. Peugnet.

The following gentlemen were granted certificate of membership:—

Thomas F. Healey, M.D.; Haynes L. Richardson, M.D.; Mathew C. O'Connor, M.D., and Gabriel Grant, M.D.

The following preamble and resolutions were presented to the Society by the Comitia Minora, through Dr. J. C. Peters, and unanimously adopted:—

"WHEREAS, The Legislature of the State of New York did not provide for the publication of the Transactions of the last meeting of our State Society,

"*Resolved*, That the Medical Society of the County of New York is of the opinion that the Committee on Publication of the State Medical Society should at once proceed to publish the same at the expense of the County Medical Societies, or in any other manner that they may think more favorable for securing the immediate publication of the Transactions.

"*Resolved*, That this Society will pay its proportionate amount of the expense that the Committee on Publication may find necessary.

"*Resolved*, That a copy of this preamble and resolutions be sent by the Corresponding Secretary to the Acting President of the State Medical Society, and to its Committee on Publications."

DEATH OF HENRY STUART HEWIT, M.D.—At a meeting of the House Staff of Charity Hospital, held August 21st, 1873, the following resolutions were unanimously adopted:

Whereas, It has pleased all-wise Providence to remove by death Dr. Henry Stuart Hewit: Therefore,

Resolved, That we are called upon to mourn the loss of one whose counsel and advice have been sources of profit and pleasure to all.

Resolved, That in his official relations to this Hospital, as President of the Medical Board and Visiting Surgeon, he has shown a high classical and medical culture, which, combined with integrity and personal affability, has endeared him to many by ties of personal friendship, and gained the respect of all who knew him.

Resolved, That copies of these resolutions, duly authenticated, be sent to the family of the deceased, and printed in the medical journals of this city.

W. OLIVER MOORE, M.D.,
W. E. FORD, M.D.,
G. O. MORRISON-FISET, M.D., } *Committee.*

The following series of resolutions were unanimously adopted by the Medical Board of Charity Hospital:

Whereas, Dr. Henry S. Hewit, our late President, and for a long time our colleague in the Medical Board of Charity Hospital, has been suddenly stricken down by the hand of death while in the active discharge of his professional duties: Therefore,

Resolved, That in the death of Dr. Hewit, the Hospital has lost a faithful and efficient officer.

Resolved, That having endeared himself to us his colleagues by his frankness, sincerity, and earnestness of character, united to the many other virtues he possessed, we mourn in him the loss of a true friend and a zealous co-laborer.

Resolved, That as a memorial to our late President, the Medical Board request the Commissioners of Public Charities and Correction to have the following inscription placed upon the tablet in the hall of the Hospital: "Henry S. Hewit, M.D., President of the Medical Board of Charity Hospital, died August 19, 1873, while on duty as one of the attending surgeons."

Resolved, That we tender to the family of the deceased our sincere sympathy in their deep affliction.

Resolved, That these resolutions be entered in full upon the Minutes of the Medical Board, be published in THE MEDICAL RECORD and the *New York Journal of Medicine*, and that a certified copy of the same be forwarded to the family of the deceased.

ALEX. W. STEIN,
Secretary *pro tem.*,
Medical Board Charity Hospital.

THE CANADA LANCET nearly doubles its former capacity with the issue of the number for Sept. 1st.

A STRANGE MEAL.—At a meeting of the Medical Society of Victoria, held in June, 1872, the following collection, taken from the stomach of a lunatic, upon whom a post-mortem examination had been made, was exhibited: Twenty-five pebbles, sixteen pieces of glass, twelve nails, one screw, two bones, a button, five bits of tin, a peach stone, six fragments of a pipe-stem, and a whole cutty pipe.

THE SIXTH ANNUAL MEETING OF THE CANADA MED. ASSOCIATION was held at St. Johns on the 6th of August. Dr. Marsden, of Quebec, was elected President, and Dr. David, of Montreal, General Secretary.

MEDICAL SOCIETIES IN SWITZERLAND.—There are forty medical societies in Switzerland, including practitioners in all the cantons except Tessin and Wallis. The largest is the cantonal society of Zurich, with 149 members. One—the Oberamergau Medical Society—is more than a hundred years old; and five others have existed more than fifty years. About half of them hold twelve or more meetings in the year; the remainder meet less frequently—from one to seven times in the year. The cantonal society of Bern possessed a fund of 9,500 francs at the end of 1871; the subscriptions to the others vary from one to five francs yearly. —*London Medical Record.*

VOLTAIRE'S DEFINITION OF A PHYSICIAN is, "An unfortunate gentleman expected every day to perform a

miracle; namely, to reconcile health with intemperance."

Petroleum Champagne.—*The Doctor* gravely says: "The acute commercial element of the Americans—that part which we may suppose sent over the wooden nutmegs—has discovered that by the aid of flavoring it is possible to dispose of mineral oil as champagne; and we are assured on the testimony of those who may be supposed to know—viz., American mineral-oil refiners and brokers—that they sell large quantities to champagne-makers. The 'stuff' is said to be sweetened with glycerine, as sugar does not answer, aerated by a soda-water machine, and sold for ball-room consumption. It produces terrible headache, and often severe diarrhœa and other evil effects. Let us hope that it is not true that a consignment of this stuff has reached England *viâ* a French port."

[We wonder if *The Doctor* has heard of a disease called *Hæmatuprosis*, which a physician now resident of this city, but formerly of Philadelphia, first described. The patient—a German—had been addicted to excessive use of lager-beer, and at last manifested symptoms of poisoning, which were attributed to some of the principles of the lager. His physician directed the use of hot baths, for the purpose of aiding the elimination of the poison, and a remarkable thing in connection with this portion of the treatment was, that the water of the bath became effervescent on account of the amount of carbonic acid which it absorbed. The wife of the patient—a frugal German woman—took advantage of this phenomenon to bottle the water and sell it for ginger-pop; but we are not able to say whether she sent any of it to England. Our cousins would do well to look out for it.]

The Lord Mayor's Reception of the members of the British Medical Association, on the 5th of August last, in London, is particularly worthy of note. The State Drawing-room and Long Parlor of the Mansion House were filled with works of art; the Justices' Room and the Venetian Parlor were converted into dark rooms for electrical and other luminous experiments. The Egyptian Hall was arranged as a concert-room, and vocal music was furnished by Mesdames Nilsson and Patti, Signori Foley and Rizzoli, Mr. Stanley and others; the Old Ball-room was fitted as a refreshment-room. The supply of microscopes, spectroscopes, photographs, portable aquaria, polariscopes, minerals, etc., was large; and altogether everything appears to have been done to render the evening delightful to every one of the immense crowd of visitors, numbering 3,400; several hundred being ladies.

Green County Medical Society.—The following officers were elected for 1873: *President*, Walter B. Chase, M.D.; *Vice-President*, Bradley S. McCabe, M.D.; *Secretary and Treasurer*, Silas W. Dean, M.D.

Dr. Moritz Heinrich Romberg died of chronic cardiac disease on the 16th ult. He was born at Meiringen, and graduated in medicine at Berlin in 1817. Dr. Romberg's life appears to have been a laborious one, since he held the position of medical officer to the poor of Berlin from 1820 to 1845, and in 1830 and 1836 he was director of the cholera hospital in the same city. In 1838 he was elected extraordinary professor, and in 1845 ordinary professor, to the university at which he graduated. He is an instance of a physician successful in a special branch of medicine, although doing a more or less general practice and writing upon other subjects. He was the author of a work on cholera, and of various contributions to the periodical press, but will be chiefly remembered on account of his treatise on the "Nervous Diseases of Man," which was first published, in three parts, in 1830, 1833, and 1836, and was in 1853 translated into English by Dr. Sieveking for the late Sydenham Society. At the date of its appearance it was undoubtedly the best book extant upon the subject upon which it treats. —*Med. Times.*

Professor Sharpey, of England, has recently been successfully operated on for cataract.

A New Use for Old Stockings.—A plan of putting up simple fractures of the leg, which is not, we believe, generally known, and which country surgeons may sometimes find convenient, has lately been practised at University College Hospital. The broken limb is first bandaged with an ordinary roller; this is well coated with the gum and chalk mixture; a stocking is slipped on over this, and similarly coated; another stocking is put on over this; and a final layer of gum and chalk over all. Thus, for a case of transverse fracture with little displacement, or of fracture of one bone, two or three stockings and a little starch or plaster-of-Paris supply a very neat and serviceable splint.—*British Medical Journal*, May, 1873.

A Cholera Panic.—A writer from Jonesboro, Tenn., in the St. Louis *Globe*, says that that town has ordinarily about one thousand five hundred inhabitants, but at present there are not twenty-five people left. The rest have run away to the various mineral springs in the neighborhood. The town is a picture of perfect desolation. It has been deserted for nearly three weeks, and the streets are overgrown with grass. I went the whole length of the place, and did not meet a man, woman, or child; no, nor a horse, cow, or dog. The people went away in such haste as to forget almost everything; and left the dogs chained, the cows in the lots, and the calves in the stalls. Some of the chained dogs starved to death; most of the stock was driven out of town to, and put in, pasture by the few men who stayed, and the dogs that were loose were so lonesome and howled so dismally that the men took their guns and shot them all. Every store is closed, and even the hotel cook, sole occupant of the building, refused to admit me as a guest. I did not intend to stop in town, but wished to go to my relations, some five miles out. I could get no conveyance. I got one of the grave-diggers to guide me, and walked a part of the way, until I could get a rattle-trap buggy to take me the remainder. But the country people were afraid of us both: some refused him admission to their houses, and others wondered if I were not afraid to ride with him. He told me he recently went to a country house where the occupants refused him admission, and rather than have him near, sent his dinner out to the fence, and told him to eat it and travel. He had been using carbolic acid as a disinfectant. They perceived the peculiar odor, and supposing it to be the smell of the cholera, held their noses and beat a precipitate retreat.

The Michigan University, at Ann Arbor, has matriculated eighty-eight girls for the coming year, thirty-seven of them being in the medical department.

Maine Medical Association.—The officers of this Association for the ensuing year are as follows: *President*, Dr. A. T. Page, of Bucksport; *Secretary*, Dr. O. C. Hunt, of Portland.

The University of Nashville.—Professors Bowling, Winston, and Lindsley have resigned their chairs in the University of Nashville. They are succeeded by Drs. Maddin, Nichol and Callender.

THE OLDEST PRACTISING PHYSICIAN.—A correspondent of the *Medical and Surgical Reporter* writes, in answer to a query, that Dr. Ahl, of Baltimore, continued in active practice until he was ninety-six years of age; Dr. Bernardus Van Leer, of Chester Valley, did the same until he was one hundred and two years old. He died at the age of one hundred and four.

UNIVERSITY OF MICHIGAN.—Dr. Eugene W. Hilgard, a native of Germany, is the new Professor of Geology, Zoölogy and Botany in the University of Michigan. He has been for the last eighteen years a professor in the State University of Mississippi.

NEW YORK SOCIETY FOR THE RELIEF OF THE RUPTURED AND CRIPPLED.—The Tenth Annual Report of this Society, for 1873, gives the following particulars: Since the opening of the Institution in May, 1863, 21,814 have been relieved—the first year 828; the present year 4,023. In the dispensary department 3,858 received treatment, and nearly all of them required surgico-mechanical appliances. Of the number afflicted with rupture, 1,047 adults and 489 children were supplied with trusses. The next most common ailment was varicose veins, the result of arduous labor. *Resident Physician and Surgeon*, James Knight, M.D.; *Assistant Physician and Surgeon*, Virgil P. Gibney, M.D.; *Resident Junior Assistants*, Truman S. Sumner, M.D., and Thomas H. Hawkins, M.D.

VERMONT INSANE ASYLUM.—Dr. Wm. H. Rockwell has resigned the superintendency of this institution, in consequence of permanent disability from fracture of the thigh. Dr. Joseph Draper, of the New Jersey State Asylum, has been appointed to fill the vacancy.

MASSACHUSETTS MEDICAL SOCIETY.—At the late annual meeting of this Society, the following officers were elected for the ensuing year: *President*, Dr. G. C. Shattuck; *Vice-President*, Dr. E. Cotting; *Corresponding Secretary*, Dr. C. W. Swan; *Librarian*, Dr. D. H. Hayden; *Treasurer*, Dr. F. Minot; *Orator*, Dr. Nathan Allen; *Anniversary Chairman*, Dr. R. L. Hodgdon; *Committee of Arrangements*, Drs. R. Amory, A. H. Nichols, C. J. Blake, T. Dwight, Jr., J. C. Warren.

Drs. Wm. Bushnell, Milton Fuller, Herman L. H. Hoffendahl, Geo. Russell, Israel T. Talbot, David Thayer and Benjamin H. West were expelled from the Society for being irregular practitioners, after a long and fair trial.

HARVARD MEDICAL SCHOOL.—C. Ellis, M.D., Dean of the Medical Faculty of Harvard University, takes, in a letter to the *Phila. Med. Times*, a very hopeful view of the success of the Harvard Medical School, and states that the receipts from students were only $3,600 less in 1871–72 than in 1870–71. One hundred and fifty students under the new plan gives a considerably larger revenue to the school than 300 did under the old. He thus concludes: "If five or six of the other leading medical schools in this country would join the Harvard school in making the changes in the system of Medical Instruction, which Dr. Stillé and all other intelligent physicians who honor their profession admit to be desirable, there would be no question in any one's mind about the success of the reform."

STRICTURE OF THE URETHRA.—The reprint from the *N. Y. Medical Journal*, containing the "Remarks on Strictures of the Urethra," by F. N. Otis, M.D., of New York, has much that is instructive to practitioners concerning strictures of extreme calibre, with cases, and a description of new instruments for their treatment.

NORMAL OVARIOTOMY.—At the 24th Annual Session of the Georgia Medical Association, held recently, Dr. Robert Battey, of Rome, Ga., delivered an excellent paper on "Normal Ovariotomy," which appears in the form of a reprint from the *Atlanta Medical and Surgical Journal*.

YELLOW FEVER AT SHREVEPORT AND MEMPHIS.—Shreveport, La., on the Red River, was visited during the latter part of August with yellow fever of the most malignant type, the disease having been brought, so it is thought, by a travelling circus company, ten of whose members died at Vernon. The place was quite destitute of any sanitary precautions, and its spread appears to have been entirely beyond human control, and exceedingly fatal. A despatch from Shreveport, dated Sept. 16th, placed the deaths from Sept. 1st to that time at one hundred and twenty-six, and the number of cases then in existence at from six to eight hundred. On the 19th the population, by deaths and removals, had been reduced from 5,000 to 3,000, and of this number it was estimated that fully 1,000 were sick or convalescent. The utmost destitution prevailed, and was the cause of as much suffering as the disease itself. Telegraph operators had all died, and their places, as well as relays of physicians, nurses, and apothecaries, had to be supplied from New Orleans, where the Howard Association have organized a system of relief and received subscriptions, which, up to the time of going to press, have been pouring in from all parts of the country.

The latest despatches say that the disease is decreasing from want of material, and that it is extending in the suburbs, attacking negroes and acclimated persons, even such as had the fever in the epidemic of 1867.

On the 16th the disease was reported at Fulton, the terminus of the Cairo and Fulton R. R.

On the 18th Natchez was quarantined against all outsiders, and no cases of the disease have as yet been reported there.

On Sept. 14th the Board of Health of Memphis announced the presence of the disease in that city, where it was most prevalent in the north-west part of the town. Having started in the neighborhood of Wolf River, on that day (the 14th) eleven interments were made, the total up to that time having been thirty.

On the 16th the authorities commenced to burn coal-tar in the infected locality, and many of the citizens, by the advice of physicians, were leaving for places of safety.

The disease in Memphis is reported to be of a milder type than in Shreveport, and it is said that nearly all properly managed cases recover.

DEATH OF NÉLATON.—Auguste Nélaton, the famous French surgeon, died at his house, in Paris, on the 20th of September, of disease of the heart. He was born on the 17th of June, 1808, and after a thorough preliminary education studied medicine under Dupuytren, and received the degree of Doctor of Medicine from the University of Paris in 1836.

Soon afterwards he became surgeon to the hospitals in the French capital, and a member of the Faculty of Medicine. He was chosen Professor of Clinical Surgery in the University in the month of April, 1851, and in 1856 was admitted to the Academy of Medicine in the section of Chirurgical Pathology. He was a close observer, a practical student, and a careful and enlightened practitioner. Decorated with the Legion of Honor, in 1848, he was promoted to the rank of officer June 16, 1856, and to that of commander on the 24th of January, 1863.

It was he who introduced the bilateral operation

for stone, and since his voyage to Caprera, and the extraction of Garibaldi's bullet, he had become one of the most, if not *the* most, popular of the French surgeons. His reputation was much heightened by the fact of his having been the only practising medical man made a Senator and Grand Officer of the Legion of Honor during the Empire.

He was voluminous as a writer and publisher on subjects connected with his profession. The Doctor was made a member of the French Academy of Sciences on the 3d June, 1867, and soon afterwards retired from his professorship on account of ill-health. His reputation is world-wide, and his character universally esteemed.

More than six years since he began to suffer from cardiac disease, which became aggravated after the overthrow of the Empire. Still, with strict attention to his diet and habits, he was able to attend to some professional work until about two months before his death, when his health failed him entirely, and he was obliged to return to Paris on the 10th of August. For more than a month before his death the papers published a daily bulletin of his condition, and the subject was everywhere talked of as a threatened national loss.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from Sept. 5, 1873, to Sept. 18, 1873.

PAGE, CHAS., Surgeon.—Relieved from duty at Fort D. A. Russell, Wy. Ty., and assigned to duty at Omaha Barracks, Nebr. S. O. 140, Department of the Platte, Sept. 12, 1873.

RANDOLPH, JNO. F., Surgeon.—Relieved from duty at Omaha Barracks, Nebr., and assigned to duty at Fort D. A. Russell, Wy. Ty. S. O. 140, C. S., Department of the Platte.

WOODHULL, ALFRED, Assistant Surgeon.—Granted leave of absence for twenty days, with permission to leave limits of Department. S. O. 157, Department of the South, Sept. 6, 1873.

KIMBALL, J. P., Assistant Surgeon.—After completion of duty assigned him in Department, S. O. 190, C. S., to report in person at these Headquarters for further orders. S. O. 189, Department of Dakota, August 25, 1873.

YEOMANS, A. A., Assistant Surgeon.—Ordered to Washington, D. C. S. O. 178, A. G. O., Sept. 6, 1873.

BYRNE, C. B., Assistant Surgeon.—Granted leave of absence for sixty days, with permission to apply for an extension of thirty days. S. O. 182, A. G. O., Sept. 11, 1783.

New Publications.

BOOKS RECEIVED.

THE MEDICAL DEPARTMENT OF THE UNITED STATES ARMY, from 1775 to 1873. Compiled under the direction of the Surgeon-General, by HARVEY E. BROWN, Ass't Surg. U. S. Army. Washington, D. C.: Surgeon-General's Office, 1873.

DISEASES OF THE PROSTATE AND THEIR PATHOLOGY AND TREATMENT. By Sir HENRY THOMPSON, F.R.S., etc. Fourth edition. Philadelphia: Henry C. Lea. 1873.

HAND-BOOK OF PHYSIOLOGY. By WILLIAM STENHOUSE KIRKES, M.D. Edited by W. MORRANT BARKER, F.R.C.S., etc. A new American from the eighth enlarged English edition. Philadelphia: Henry C. Lea. 1873.

SIX MONTHS UNDER THE RED CROSS, with the French Army. By GEORGE HALSTEAD BAYLAND, M.D. Cincinnati: Robert Clarke & Co. 1873.

BODY AND MIND: An Inquiry into their Connection and Mutual Influence, especially in Reference to Mental Disorders. To which are added Psychological Essays. By HENRY MAUDSLEY, M.D., etc. London: Macmillan & Co. 1873.

DIGESTION AND DYSPEPSIA, a complete Explanation of the Physiology of the Digestive Process, etc., etc. By R. T. TRALL, M.D. New York: S. R. Wells, Publisher. 1873.

THE HAND-BOOK FOR MIDWIVES. By HENRY FLY SMITH, B.A., M.B. Oxon., M.R.C.S. London: Longmans, Green & Co. Boston, Mass.: James Campbell. 1873.

THE PREVENTIVE TREATMENT OF CALCULOUS DISEASE, AND THE USE OF SOLVENT REMEDIES. By Sir HENRY THOMPSON, F.R.C.S. Philadelphia: Lindsay & Blakiston. 1873.

THE CEREBRAL CONVOLUTIONS OF MAN, represented according to Original Observations, especially upon their Development in the Fœtus. By ALEXANDER ECKER, Prof. of Anatomy and Comparative Anatomy in the University of Freiburg, Baden. Translated by Robert T. Edes, M.D. New York: D. Appleton & Co. 1873.

EPIDEMIC OF MALIGNANT CHOLERA. By ALFRED STILLÉ, M.D. Philadelphia: J. B. Lippincott & Co. 1873.

A SYSTEM OF MIDWIFERY, including the Diseases of Pregnancy and the Puerperal State. By WILLIAM LEISHMAN, M.D., Regius Professor of Midwifery in the University of Glasgow, etc., etc. Glasgow: James Macletiose; Macmillan & Co., London and New York. 1873.

A PRACTICAL TREATISE ON THE DISEASES OF THE EAR, including the Anatomy of the Organ. By D. B. ST. JOHN ROOSA, M.A., M.D., Prof. Diseases of the Eye and Ear in the Univ. of City of New York, etc., etc. New York: W. Wood & Co. 1873.

LECTURES ON CLINICAL MEDICINE. By A. TROUSSEAU, late Prof. Clin. Med. in Faculty of Med., Paris, etc., etc. Translated from third revised and enlarged ed. by Sir JOHN ROSE CORMACK, M.D., F.R.S.E., and P. VICTOR BAZIRE, M.D. In two vols. Philadelphia: Lindsay & Blakiston. 1873.

A POPULAR TREATISE ON FUNCTIONS AND DISEASES OF WOMAN. By LUCIEN C. WARNER, A.M., M.D. New York: Manhattan Pub. Co. 1873.

A TREATISE ON PNEUMATIC ASPIRATION OF MORBID FLUID: A Medico-Chirurgical Method of Diagnosis and Treatment of Cysts, Abscesses of Liver, etc. By Dr. GEORGES DIEULAFOY, Gold Medallist of Hospitals of Paris. Philadelphia: J. B. Lippincott & Co. 1873.

CHEMISTRY, INORGANIC AND ORGANIC, with Experiments. By CHAS. LOUDON BLOXAM, Prof. Chemistry, King's College, London. Second and revised Eng. ed. Philadelphia: H. C. Lea. 1873.

A MANUAL OF MEDICAL JURISPRUDENCE. By ALFRED SWAINE TAYLOR, M.D., F.R.S. Seventh Amer. ed., by JOHN J. REESE, M.D., Prof. Med. Jurisprud. Philadelphia: H. C. Lea. 1873.

Original Lectures.

CLINICAL LECTURE ON PUERPERAL CONVULSIONS.

By Prof. W. T. LUSK, M.D.

DELIVERED AT BELLEVUE HOSPITAL.

(Phonographically reported for The Medical Record.)

In cases of puerperal convulsions, sometimes prodromata warn us of the impending explosion, but often enough they are entirely absent, so that whether they exist or not it is well to occasionally examine the urine of a pregnant woman.

When any of the ordinary prodromata are present, such as œdema of the feet and hands, puffiness of the face, singing in the ears, dimness of vision, and, what is very suspicious, the existence of certain inveterate neuralgic ailments, and at the same time albumen is detected in the urine, a shrewd guess may be hazarded that the woman will have convulsions. But even with these conditions convulsions do not necessarily take place. However, it is well to accept the warnings, and place the woman upon such treatment as shall tend to prevent the development of eclampsia. The best means for the accomplishment of this end consist in most cases in the employment of remedies likely to improve the condition of the blood, which is usually watery and much impaired in quality. Among our most reliable agents, in addition to good food, are the muriated tincture of iron and the chlorate of potash. Milk should enter largely into the diet, both on account of its nutritive properties and its special action upon the kidneys. The skin should be maintained in a healthy condition by warm baths. Diuretics and hydragogue cathartics are indicated only when the diminution in the quantity of the urine, or the lowering of the specific gravity, threatens the patient with an immediate pressing danger.

As exceptions to the foregoing directions are those cases where the women are plethoric rather than hydræmic. In these a reducing diet, saline cathartics, and sometimes even venesection to a moderate extent, may be resorted to. Formerly all women were bled during pregnancy, and many an old woman will tell you nowadays that in her time, when bleeding was the rule, they never had puerperal fever, or any of the dreaded accidents of the present day. Now we have passed to the opposite extreme. Cazeaux has convinced us all that the condition of a pregnant woman is either that of anæmia or chlorosis. There is, however, some doubt, in spite of the chemists, whether this rule is sweepingly correct. In some primiparæ gestation appears to occasion an enormous increase of appetite, and I confess that I have at times found it impossible, in the absence of any physical signs, to associate with the rosy lips and brilliant coloring of many of these patients any idea of anæmia. In such cases, should there be manifested any marked evidences of cerebral hyperæmia, I should strongly incline toward the employment of the lancet, for the sake of the immediate relief venesection occasions.

That bleeding is not necessarily the fatal operation which it is assumed to be to-day, is shown by the case reported by Cavalli, of Maria Besana, who was bled in twenty-eight years three thousand five hundred times.

The treatment of the convulsions proper depends somewhat upon our views concerning their origin.

The popular belief undoubtedly is, that they are due to the accumulation of urea in the organism, and that the presence of albumen in the urine during the seizure is to be accepted as the evidence that such an accumulation has been in progress. In connection with this theory, however, the following facts are to be borne in mind: 1. A considerable number of observations where the urine presented no traces of albumen either before or after the convulsions. 2. A still larger collection of cases in which the albumen appeared subsequent to, but not previous to, the outbreak. The observation of this peculiarity is often ascribed to Braxton Hicks, though, as a matter of fact, his paper published in the "Obstetrical Transactions" of 1867 simply shows that he was at the time ignorant of the extent to which the matter had already been discussed in Germany. 3. When the kidneys are examined after death, the changes found in them are usually very trivial. 4. Bright's disease existing before pregnancy is far from giving occasion to an unfavorable prognosis. I know one lady who had Bright's disease previous to her marriage, and has now had four children, yet she has never had convulsions. Another lady had one child after the disease of the kidneys had reached an advanced stage, yet there were no convulsions, though she died from the kidney affection about eighteen months afterward. Scyfert found that out of eighty pregnant women suffering from confirmed Bright's disease, only two had convulsions. 5. Patients suffering from carcinoma uteri may die from hemorrhage, septicæmia, marasmus, peritonitis, etc.; but in many cases the cancerous infiltration invades the bladder and produces occlusion of the ureters, so that death results from suppression of the uretero. Many cases of death from this cause, among them fifty-four reported by Cornil and Ranvier, stand recorded as having terminated without convulsions. Each new case of this description is usually reported with a certain species of surprise by the attending physician.

Notwithstanding these facts, however, I am not to be understood as altogether rejecting the uræmic theory. Clinically it remains true that albumen in the urine during pregnancy is a frequent precursor of convulsions. Often I have found, in cases of eclampsia to which I have been summoned, a total suspension at the time of the urinary secretion. Not long since I saw a patient who had already had three convulsions, and was then in the fourth. As the head was low down on the perineum, I determined to use forceps and deliver at once. On introducing the catheter as a preliminary, I drew off three pints of retained urine from the bladder. After that the convulsions ceased. In order that uræmic phenomena should be produced, it is necessary that the accumulation of urea in the tissues and fluids of the body should have gone on to a certain non-determinable extent. In cases where little food is taken, and the patient is quiet in bed, the production of urea may be very small, so that in the patients suffering from cancerous affections noted, death may take place from the pain caused by the distention of the ureters before a sufficient amount of urea is stored up in the system to give rise to uræmic symptoms.

Certainly all cases, however, are not due to blood-poisoning. In some women the pregnant condition induces an undue excitability of the nervous system. All the tissues of the body are depreciated, and the nervous system acquires an excessive reflex susceptibility. Pressure upon the peripheral nerves during labor becomes the direct exciting cause of the explosion.

Traube and Rosenstein look upon puerperal convulsions as due to anæmia of the brain. The first

step in the production of this condition is an hydræmic state of the blood. An increased pressure in the capillaries of the brain arises from hypertrophy of the heart which is a constant accompaniment of pregnancy, and the interference with the venous circulation due to the gravid uterus. Œdema of the brain results, and as the skull is unyielding, secondarily the vessels of the brain suffer compression, and the consequent anæmia gives rise to convulsions.

On the other hand, plethoric women do have convulsions, which perhaps are due to congestion of the spinal cord.

Probably we are nearest the truth when we adopt the view that causes of puerperal convulsion are multiform. When we come to treatment, we find that even on theoretical grounds beneficial results are to be expected in many instances from venesection. In uræmia, bleeding helps to unload the system temporarily of a part of its poison; in plethoric persons it relieves the congestion; in threatened œdema of the brain it may ward off permanent damage to the cerebral organ. In nervous anæmic persons, where the origin is due to reflex excitability, it can only aggravate the disorder, and exposes such women afterward to peritoneal inflammations. Its virtue lies, it is to be remembered, however, purely in the fact that in the face of an immediate threatening danger a little time may be gained by its employment. Therefore, unless my patient is not already greatly depressed, I do not hesitate to draw from the arm twelve to sixteen ounces of blood.

Then I resort to anæsthesia, pushed to an extent sufficient not only to destroy sensibility, but likewise to overpower the voluntary motor-nerves of the body. Hypodermic injections of morphia (gr. ¼, repeated, if required, once or twice) support the action of the anæsthetic, and render much less of the agent necessary. Anæsthetics and narcotics, I am sure from experience, often succeed, after moderate venesection, where previously they had failed.

But anæsthesia must not be maintained indefinitely. When kept up for from twenty-four to forty-eight hours it is pretty certain that the child will fall a victim to such prolonged employment. It therefore becomes incumbent to empty the uterus as soon as practicable. If labor has somewhat progressed, this is to be accomplished by forceps or version, according to the nature of the case. In the earlier stages the Barnes dilators render us excellent service. If the cervix is too narrow to admit the smallest size, I begin with a sponge-tent. Manual dilatation is at all times a detestable practice. After dilatation the cervix is often œdematous, and then, if the head has not descended, forceps are to be used with the greatest caution.

After the labor is over, if the convulsions continue, they may be controlled by hypodermic injections of morphia. Chloroform, after confinement, is no longer a safe agent.

The patient* whose delivery you witnessed has, since her confinement, been put upon the following mixture:

℞. Infusi. Digitalis..... ℥ iv.
Potassæ Acetat..... ℥ i.
Solv.

Tablespoonful every four hours. Her kidneys are now acting freely.

American Medical Graduates. — The various American Medical Colleges have graduated this year about twelve hundred students.

* History of case omitted.

Original Communications.

SOME REMARKS ON CLIMATE.

By Wm. H. BENNETT, M.D.,
NEW YORK.

Although in the treatment of phthisis the influence of climate has of late received considerable attention, and the effects of its different elements have been more faithfully studied, yet the mind of the medical profession is still unsettled as to which of the several climatological agencies proves most beneficial, and which is most pernicious, in this disease. The humid climates of Florida and the West Indies have their advocates as well as that of the cold North-west, while there are many who have no preference; avoiding extremes, they consider one climate about as good as another, and attach great weight to frequent change of air and scene, which, by increasing the appetite and favoring assimilation, they think does all the good. There are still others who select different climates for different cases. Where such a variety of opinions exists I do not presume to decide; I venture, however, a few remarks on this subject, which I consider an important one.

The great difference of opinion regarding the influence of temperature and moisture, the principal elements of climate, on the progress and result of pulmonary consumption, arises from the circumstance that many well-marked cases have been benefited or cured in localities where cold, or heat, or moisture was the predominating feature, and well illustrates the fact that the sources of fallacy in all departments of medical science are numerous, and that we must exercise great care in trying to guard against them. There is a class of persons who seemingly possess immunity from phthisis, and although living under the most favorable circumstances for developing the disease, they remain uninjured. Others less strongly constituted, under the same conditions, are attacked sooner or later; but originally possessed of considerable vitality, and the functions of the other organs being normal, or but slightly impaired, they have only to avoid the exciting cause to check the progress of the disease, and if favorable circumstances are brought to bear upon them they get well—very frequently in the same locality. They probably give up their occupation, avoid their former excesses, and protect themselves as far as possible from every source of evil; if now to all this some add a change of residence to a place possessing only slight climatological advantages over their former abode, their recovery may be hastened; but the influence of the climate frequently gets credit for more than it deserves. If the change happens to be to a moist climate, both patient and physician may be led to think the evils of moisture overrated; or if it is to a cold climate, cold may be looked upon as no drawback to the favorable termination of phthisis. Unfortunately, all cases are not such favorable ones for treatment; the majority are below par in every respect, and many of them were so when they were born. The removal of all sources of irritation and debility is not sufficient to arrest the disease in these patients, and it will not suffice simply to send them to a better climate than the one in which they reside; they need the best that exists, and even then we are but too often mortified to find them sink.

What part climatological agencies may play in the causation of phthisis I am not prepared to discuss,

although I think it proven that the greatest number of deaths from consumption occurs in humid climates, where the extremes of heat and cold are greatest, and sudden changes frequent, notwithstanding many go abroad to die. But that climate has a decided influence over the progress and result of this disease, after it is once developed, is what the teachings of physiology would lead us to expect, and what daily experience demonstrates beyond a doubt.

It must be admitted that the selection of a climate may be determined in a great measure by the peculiarities of the case, and that certain patients may do well in a climate which would only hasten the disease to a fatal termination in others; but this is no argument in favor of the theory that, as a rule, the peculiarities of individual cases require the influence of different elements of climate; the fact being, that patients in the first stage of phthisis, or those possessing considerable vitality, may be able to resist the evil influences of a climate as well as take advantage of the favorable ones, which cannot be done by cases more advanced or more debilitated. I think it may be stated that there are certain peculiarities of climate, which, if they could be secured together, would constitute a standard climate, suitable for nearly all cases; and these peculiarities would be: 1st, a comparatively dry atmosphere; 2d, absence of extremes of temperature; 3d, no great diminution of atmospheric pressure. Frequent winds, if not too high and cold, and if the patient could be properly protected from them when necessary, would be rather beneficial than otherwise. Slight variations of temperature also would be rather favorable than prejudicial.

Temperature, with its variations, is generally considered of first importance in the selection of a climate; and in seeking mildness and uniformity great drawbacks are frequently overlooked. But the agencies heat and cold cannot be discussed without at the same time considering the effects of moisture. This latter agent is an evil at all temperatures when present in considerable quantity, and its pernicious effects are increased as either extreme of temperature is approached.

A moist warm climate can, of course, only be endured during the winter months; and although, compared with that from which certain patients may have removed, it may be beneficial, and although some patients may improve in such a climate, it is certainly not the proper one for the consumptive; for, aside from the fact that exhalation from the skin and lungs is diminished, and the effect on the general health pernicious, owing to the continued high temperature of the body, due to imperfect evaporation from the surface, and the fact that the functions of the different organs are interfered with, causing debility, loss of sleep and appetite, the immediate effect upon the local disease itself is injurious, particularly if softening have already commenced. The secretion from all diseased surfaces is increased in a warm, humid climate; for the blood-vessels of every part with which the moist atmosphere comes in contact are dilated, and the circulation through them is retarded. If there exist a cavity secreting muco-purulent matter, this latter is augmented and cicatrization hindered or prevented. Diseased tissues absorb moisture from the air, when it is in excess, at all temperatures, and become swollen and tumefied. This fact is well demonstrated by watching bad cases of chronic bronchitis or nasal catarrh on days of excessive humidity; even though the sun may be shining brightly, these patients will complain of feeling "stuffed up." The first effect of a sudden great increase of moisture in the atmosphere is a swelling of the affected membranes, and after some hours the secretion is apparently increased. This apparent increase is partly owing to accumulation, as none, or but little, of the water is evaporated; there is, however, a real increase of secretion. If the Schneiderian membrane only be diseased, the swelling and hypersecretion will be confined to it; but if the mucous membrane of the larynx and the mucous membrane of the bronchi be also affected, they will likewise feel the change. I think cases of true catarrh of the Eustachian tube still better illustrate this fact. The prevalence of phthisis among the natives of warm, humid climates is too well known to require comment.

A cold, moist climate is universally acknowledged, both by the profession and the laity, to be the very worst in which a consumptive can reside; but cold climates, where the atmosphere is comparatively dry, are beneficial to a certain class of cases, for even extreme cold is well borne in the absence of moisture. Although the function of the skin is less active than in a milder climate, its activity may be increased in a measure by exercise and warm clothing, and the extra strain on the kidneys consequently diminished. The secretion of the mucous membranes of the air-passages, and all morbid secretions which are at all affected by contact with the air, are lessened rather than increased; for the pulmonary exhalation is facilitated and the capillaries are contracted. But such a climate is only suited to patients who have vitality enough left to react against the cold and take advantage of out-door exercise, for confinement to the house must certainly prove injurious; and these will be mostly cases in the first stage of phthisis, uncomplicated by renal disease. Chronic catarrhs are also benefited by a cold, dry climate, but in all cases the risk of acute attacks must not be lost sight of. Moreover, during the spring months in these cold climates, after the thaws commence, the atmosphere cannot be called dry, and both consumptive patients and those suffering from catarrhal affections of any part of the air-passages are better off somewhere else.

In all localities where the mean temperature for the winter months is high and the atmosphere comparatively free from moisture, the summers are excessively hot, so that all the organs except the kidneys are unduly stimulated, and the excitement is too great, particularly if there is any disposition to hæmoptysis. Such localities are, however, eminently suited as winter residences for consumptives, particularly for those in the third stage of the disease. Exhalation from the skin and lungs is greatly favored, and the tissues being robbed of their moisture, contract, while the capillary circulation is quickened throughout the entire body. Morbid discharges are consequently diminished or checked, and cicatrization aided. In all such climates there is a marked difference between the temperature of the day and the temperature of the night, for the locations are generally more or less elevated, and are always situated in the interior; the radiation is therefore rapid during the night; and at sunrise, the period of minimum temperature, the mercury may stand 30° or even 40° lower than at mid-day. Strictly speaking, these climates cannot be called uniform; but the periodical variations of temperature do not seem to be injurious to those suffering with phthisis, if they are properly protected. The prevalence of high winds is probably a greater drawback. Unfortunately, localities possessing warm, dry climates are mostly all arid wastes, where the comforts necessary to the well-being of invalids are not to be had; and, moreover, they are not easy of access, particularly to advanced cases, which are the ones most in need of the influence of such climates.

Moist, temperate climates, although far superior to either warm or cold humid climates, are certainly less beneficial to the majority of consumptives than comparatively dry ones. Yet where there are advantages to make up in a measure for the evil humidity, patients in the first stage of the disease, particularly those with a tendency to hæmoptysis and an over-active circulation, dry cough and dry catarrh of the air-passages, do very well. It is a question, nevertheless, whether even this class of patients would receive more benefit from a prolonged residence in such a climate than in a drier one, other things being equal.

Climates which are mild during six months of the year, or during the whole year, are not to be confounded with those which are mild only for a couple of months during the winter. These latter may properly be called warm climates during the greater part of the spring and fall months, and that of Florida may be given as an example.

Elevated regions, where other conditions are favorable, are said to be peculiarly free from phthisis; but after the disease has once been developed, any great elevation must certainly prove injurious, and a location above 3,000 feet is not to be recommended: for the more elevated a consumptive's residence, the rarer the atmosphere, and the more rapid must be the action of the heart and lungs. Besides, diminished atmospheric pressure admits of hæmoptysis where it would not otherwise occur, and if phthisis be complicated by cardiac disease, matters are made worse. Furthermore, at great elevations high winds are very prevalent during the winter months, and pneumonia is exceedingly common.

Valleys, if surrounded by high mountains, are not desirable locations; for in the evening, the moment the influence of the sun is gone, the mountains radiate heat rapidly, and when the atmosphere is cooled off a few degrees, the suspended moisture is condensed and falls down, while the warm air from below rises; and this process is kept up until the air is uniformly cooled, the consequence being that the low country is overhung by a mist more or less perceptible, which remains until dissipated by the sun on the following morning. The proximity of the locality to the sea, and the presence or absence of snow on the surrounding mountains, make, of course, a great difference as to the amount of moisture thus precipitated; for instance, at San Bernardino, Cal., eighty miles from the coast, and surrounded by high mountains which in winter are capped with snow, this process of condensation and precipitation takes place every evening, at least during the winter and spring months, and to such an extent that the whole town is enveloped in a mist during the night.

To recapitulate: 1. There are but few cases of phthisis in any stage capable of improvement, that would not be benefited by a residence in a warm, dry climate, other circumstances being favorable, during the winter months; provided they had strength enough left to stand the journey back and forth. Such a climate might prove too exciting to some few cases, but the number would be very small indeed.

2. A cold, dry climate is a good climate for uncomplicated cases of phthisis that can endure out-door exercise, and have vitality enough left to react against the evil effects of the cold. But for patients already debilitated or subject to frequent acute attacks, who would be confined to the house, such a climate is not to be thought of.

3. Patients from cold, damp climates may frequently be benefited by a winter residence in a warm, humid one, and this latter may be superior in many respects to that from which they removed; but warm, moist climates must be looked upon as rather prejudicial than beneficial to all persons with phthisis, and those who do well are for the most part to be considered as having been very favorable cases.

4. Although many consumptives are markedly improved by a residence in a moist, temperate climate, they are mostly patients in the first stage of the disease, who are benefited because they have strength enough to resist the pernicious effects of the moisture, and at the same time take advantage of the favorable circumstances. The more advanced a case, the less likely it would be to receive benefit.

A mild, dry, uniform climate, at a moderate elevation, is not to be obtained; for unfortunately mildness and uniformity can only be secured at or near the sea-shore, or at least there are no locations on our continent which are at present accessible to the majority of invalids that are not so situated; and here we must encounter that formidable enemy of the consumptive—moisture. As a place of resort for the winter months even, there is no mild and equable climate within the reach of those not prepared to "rough it," unless it is near the ocean. The greater number of those affected with phthisis, therefore, must choose between a cold, dry climate and a mild, humid one. For those who are capable of receiving benefit from the former, the climate of Minnesota may be recommended; but the selection of any particular locality for those who would be better off in the latter, is attended with more responsibility. Various places have been highly lauded, each possessing particular advantages and having also certain drawbacks.

The climate of Southern California, so favorably spoken of as a proper resort for consumptives, is a moist climate, as moist as that of Jacksonville, Florida; for the influence of the sea extends to a considerable distance inland, beyond the present limits of proper accommodations and comforts necessary for sick people, who are therefore only enabled to enjoy the climate of the coast. Even at a distance of one hundred miles from the ocean the nights in the valleys are damp, owing to the cause already mentioned. Compared with other moist climates, however, this offers some advantages. It may properly be called a mild climate during all seasons of the year, having a mean temperature of 53° F. for the winter and of 68° F. for the summer months; and it is probably as equable as any on this continent, the average maximum and minimum temperature for the coldest month (January) being 56–47°, and for the warmest month (August) 72–65°. There is a considerable difference, however, between the mean for the night and the mean for the day, particularly during the summer months, amounting to 8° to 10° F. The annual rain-fall averages about twelve inches, all of which falls between the 1st day of November and the 1st of March, about one-half the quantity precipitated in Florida (referring to no particular locality) during the same time. Unlike most other localities, the amount of moisture suspended in the air here bears no proportion to the quantity precipitated as rain; and this anomaly has undoubtedly misled many, for the climate is generally spoken of in the newspapers and journals as extremely dry during the spring and summer months especially, referring to the absence of rain. The land is mostly high and dry along the sea-coast, rising gradually from the shore to the foot of the mountains, which are from four to ten miles distant. It is a climate in which the consumptive invalid may remain during the whole year, for the days in summer are seldom hot, and the nights are always cool. It is not therefore a debilitating climate.

The accommodations at the principal places of resort are good, and the means of exercise ample. The great number of pleasant days during the winter, enabling invalids to pass a good part of their time out of doors, is a decided advantage. Against this climate it must be said that, besides being humid, high winds are somewhat frequent, and during the months of April, May, and June they occur almost daily, blowing mostly from the north-west, and raising a terrible dust in the towns, which is very annoying, if not absolutely injurious. Furthermore, frequent light fogs may be expected during the early morning hours in May and June. As a class, consumptive invalids, in the early stages of the disease, do very well in this climate; but it is not suitable for advanced cases, although superior to that of Florida.

110 East 30th St., New York.

ON

THE LOCAL TREATMENT OF VENEREAL ULCERS BY MEANS OF IODOFORM.

By G. O. MORRISON-FISET, M.D.,

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The use of iodoform in the treatment of venereal ulcers is not of long date; but its great efficacy, and the results accrued from its extensive employment in this and other hospitals, will make it almost indispensable as a therapeutic agent in this class of cases. For many other forms of ulceration but the venereal, iodoform has been found to act well—*e.g.*, lupus non-exedens, acute ulcers, ulceration of the rectum, etc., etc.; and in chancroids or syphilitic ulcerations it is one of the best agents to use. A few cases of chancroids will be found reported below; they are few in number, having been selected out of the many of those only who were discharged from the wards cured. As is the case with the majority of hospital patients (especially venereal), they will depart as soon as they begin to improve; therefore this latter class of cases is not fair for publication. The chancroid when first seen is usually cauterized with nitric acid, if it be simple and of medium size, covered with a tenacious and abundant yellowish secretion; if, on the contrary, it be small and its secretion slight, no cautery is applied. For phagedenic cases the actual cautery is generally employed. One application of the potential cautery is usually sufficient to destroy the virus. As soon as the slough caused by the cauterizing agent has separated, the application of the iodoform (either once a day, every other day, or twice a week, as the case may be) to the surface of the sore is commenced.

Iodoform may either be applied in form of powder, or suspended in glycerine, as in the following formula:

℞. Pulv. iodoformis..... gr. xlv.
Glycerinæ..... ʒiij.
Alcohol..... ʒi.
M.

The powder, when used, is simply dusted upon the ulcer with a camel's-hair brush, after carefully removing all secretion present. If situated on the glans penis or prepuce, a piece of lint is placed over it to separate the diseased from the healthy parts. If the iodoform be used suspended in some menstruum, a dossil of lint is dipped into the mixture and applied to the ulcer. The former method is preferable, the powder adhering to the surface to which it is applied; but if used in the other way, it is apt to slip from the surface of the ulcer, especially in cases of chancroids of the vulva. The sores are also directed to be washed with a solution of carbolic acid (ʒi. to Oi.) before the application of the iodoform is made.

Case I.—Michael S——, admitted April 9th to Ward 10. Three weeks before admission he contracted a chancroid upon the corona glandis, which was found to be about one-half an inch in diameter. Cauterized with nitric acid the next day. Pulverized iodoform applied three times a week. On April 21st the patient was discharged perfectly cured.

Case II.—Margaret S——, æt. 19. Admitted to Ward 14 April 14th. Three weeks before admission, she noticed a sore on her genitals. On examination, a simple chancroid was seen upon the fourchette, measuring about a half-inch in diameter. The next day the chancroid was cauterized with nitric acid, followed on the 16th by the application of the iodoform in powder once a day. April 22d, patient discharged cured.

Case III.—Albert D——, æt. 47; single. Admitted on April 8th to Ward 10. A single chancroid with ragged edges, and of about one half-inch in diameter; had contracted it four weeks before his admission. Nitric acid was applied to it, and on the next day was dressed with iodoform powder, and this continued daily. Discharged cured on April 17th.

Case IV.—Matilda K——, single, æt. 23. Admitted to Ward 14 on April 14th. Three weeks before admission she noticed a small sore on her right natis, which commenced to grow larger; it did not give her much pain. She finally was admitted to this hospital, and on examination I found a phagedenic sore with ragged edges, and covered by a tenacious, yellowish slough, emitting a very offensive odor, measuring about five inches in diameter, and greatly excavated, situated on the inner surface of the right buttock. The ulcer was thoroughly cauterized with nitric acid the day of her admission, and poultices of equal parts of pulverized linseed and animal charcoal, saturated with a carbolic acid solution (ʒi. to Oi.) were ordered to be applied three times a day. This was continued for three days, at the end of which period it was discontinued. On the 18th, the slough having separated, pulverized iodoform was ordered to be applied to the sore once a day. On the 22d the secretion had decreased, but still continued to a sufficient extent to retard the healing process; therefore the sore was again cauterized with nitric acid. The next day pulverized iodoform was resumed as a daily dressing. The patient, being anæmic, was also ordered to take cod-liver oil, chalybeates and cinchonia. Discharged cured on May 14th.

Case V.—Patrick C——, single, æt. 27. Admitted to Ward 10 April 21st. This patient contracted two chancroids upon his penis three weeks before admission; one was situated on the prepuce and the other on the frenum, both being of about the size of a nickel cent. The sores were cauterized with nitric acid, and the next day they were dressed with iodoform, this being continued every day until the 28th of April, when the patient was discharged cured.

Case VI.—Minnie B——, single, æt. 23. Admitted to Ward 14 April 22d. The patient noticed a sore upon her genitals, she says, one week before admission. A simple chancroid was found upon the fourchette, of about one inch diameter. Iodoform was applied to the sore daily, and the patient discharged cured on the 28th.

Case VII.—Joseph M——, single, æt. 32. Admitted to Ward 10 on April 24th. The patient contracted the present chancroid, which is situated upon the meatus, about three weeks before admission, it being about one inch in diameter. Chancroid dressed with pulverized

iodoform once a day. Patient discharged cured on May 12th.

Case VIII.—Terence B——, single, æt. 26. Admitted to Ward 10 on April 24th. The patient states that six weeks before admission he noticed two sores upon his genital organs. Two simple chancroids are seen, one upon the dorsum of the penis, and another on the scrotum, both being of about one half-inch in diameter. There was very little secretion. Pulverized iodoform as a dressing was ordered to be applied once a day. Discharged cured on May 1st.

Case IX.—Eliza C——, married, æt. 29. Admitted to Ward 14 on April 28th. Seven weeks before admission the patient noticed two sores upon her genitals. On examination, two simple chancroids were seen, one situated in front of the meatus, and the other in the fourchette. They were both of small size, and only a slight secretion covered their surfaces. They were both treated by iodoform in the usual manner. On May 3d the patient was transferred to another ward for uterine disease, her chancroids having healed perfectly.

FREQUENTLY RECURRING EPISTAXIS RELIEVED BY ERGOT AFTER LOCAL TREATMENT HAD FAILED.

By ANDREW H. SMITH, M.D.,

of New York.

Mr. C., aged 37, civil engineer, applied to me in the latter part of May on account of bleeding at the nose, recurring daily, and sometimes two or three times a day. The amount of blood lost each time was trifling, but the resulting annoyance was very great. The patient, naturally of rather a delicate organization, was performing an excessive amount of mental labor, and his health had suffered considerably in consequence. Digestion was slowly and imperfectly performed, and he was much annoyed with flatulence disturbing his rest at night.

Direct and rhinoscopic examination showed no abnormal condition of the nasal mucous membrane, except that the portion covering the septum on the left side was for a part of its extent unduly red.

A variety of astringents were applied locally by means of both the brush and the syringe, and such general treatment was resorted to as the symptoms demanded. This course was followed persistently for two weeks, when the general health had somewhat improved, and the congested appearance of the nasal mucous membrane, as far as open to inspection, had disappeared. Still the hemorrhages recurred as frequently as ever, being often apparently provoked by the very applications intended to prevent them.

I then prescribed the fluid extract of ergot, twenty drops to be taken three times a day. This was continued for ten days, with the effect of entirely restraining the bleeding from the time the first dose was taken. The medicine was then omitted, but in a few days the bleeding began anew. It was immediately arrested by a return to the medicine, and has not since returned, the drug being continued at gradually increasing intervals for nearly a month, when it was entirely discontinued.

408 Lexington Av., Sept. 18, 1873.

The Peninsular Journal of Medicine.—This journal is again published at Detroit, Michigan, Henry F. Lyster, M.D., being the chief editor.

Reports of Hospitals.

ROOSEVELT HOSPITAL.

Notes of Practice and Peculiarities in Treatment.

THE TREATMENT OF ULCERS.

The luxuriant granulations in a specific ulcer receive nothing but firm strapping, with adhesive plaster, and over this a firm bandage. It is not deemed necessary to make any caustic application to the granulating surface, the stimulating pressure of the straps being considered sufficient.

The straps are changed as soon as pus commences to make its appearance under their edges. The constitutional treatment varies with the particular indications.

SPECIFIC OZÆNA.

Constitutional treatment consists mainly in the administration of iodide of potassium. As a local application the patients enjoy the luxury of a hand-atomizer, using carbolic acid and bromo-chloridum.

PLASTER-OF-PARIS SPLINTS.

Plaster-of-Paris is most commonly employed where a fixed apparatus for retention is required. In the application of these splints, rollers made of the ordinary mosquito netting are employed instead of the muslin bandages; the advantages claimed for the netting being, that more plaster can be carried in its meshes, hence a lighter and more delicately formed splint can be obtained, with equal firmness, than by the old-fashioned method. The netting also is sufficiently elastic to permit its perfect adaptation to the inequalities of the limb, without reverses or wrinkles in the bandage. This is a very elegant method of applying the plaster-of-Paris splint.

FRACTURES.

In a case of fracture of the femur there was considerable inflammation during the first few days, and the patient was placed in bed and a Buck's extension apparatus applied, the foot of the bedstead elevated, thus securing counter-extension by the weight of the body. In this way the thigh was left free for inspection, free for such applications as might be desirable—a most convenient and satisfactory method of managing such cases. No retentive splints whatever were used, the limb simply lying upon a firm posterior plane surface.

SYNOVITIS.

The treatment for synovitis consists of rest, ice-bags, perhaps leeches, and anodynes if necessary. In subacute and chronic synovitis, with joint filled or partially filled with fluid, the best results are obtained by the use of sponges and a firm roller-bandage.

In this hospital, where constant pressure and fomentation are desired, the hot sponges are the agents most commonly employed, and they serve a most excellent purpose. This is also the usual method of treating sprains. Apply about the joint, as soon as possible, sponges which have been wet in hot water, and secure them by a snugly applied roller-bandage. After they are firmly secured, they may be wet again. Change every twenty-four hours.

FROST-BITE.

An interesting case of frost-bite was seen, which afforded another example of the use of these sponges.

The parts over the patella had been frozen, and when the slough came away it made an opening into the knee-joint. The limb was immediately placed upon a long posterior splint, and compression kept up steadily by the use of sponges, and not a single untoward symptom had manifested itself.

BURNS.

For these difficulties, in way of treatment, carron-oil—ol. linim. et aquæ calcis, āā—has the preference. If something can be added to correct the smell of the oil, and not detract from its virtues, it would be well.

EPITHELIOMA OF EYE.

A patient with this disease experienced great relief from the pain by the application of citric acid in moderately strong solution. The value of this remedy for this purpose has been known for some time, and this case demonstrated that it was yet virtuous.

NIGHT-SWEATS IN PHTHISIS.

When sulphuric acid, dilute or aromatic, has failed to give relief in these cases, the following is given every night in the form of pill. It sometimes acts very well.

℞. Zinci oxid..... grs. ij.
Ext. hyoscyami..... grs. iij.
M.

For the diarrhœa of phthisis, when present, persulphate of iron or injections of tr. opium and starch are used.

ERYSIPELAS.

The good old-fashioned liq. plumbi et opii is relied upon as an external application. Internally, tr. ferri muriatis is administered regularly.

"If he live, he live; if he die, he die." But he usually gets well.

PNEUMONIA.

The plan of treatment generally adopted in the treatment of this disease consists in administering quinine in six-grain doses night and morning, plenty of stimulants, and plenty of nourishment in the form of milk and beef-tea.

All the cases which have been admitted to the hospital have received this treatment, and almost all have done exceedingly well. This, it will be seen, is a substantial and vigorous treatment for an acute inflammatory affection, yet it receives the fairest of compliments.

SUBACUTE PLEURISY.

The diuretic ordinarily used is the iodide of potassium; the form of counter-irritation ordinarily employed is blisters, and lastly paracentesis.

Tapping is not resorted to until other remedies have failed.

Tonics do not appear to form any special part of the treatment; but it is fair to infer that they would be administered, at least in the advanced stages.

It is favorably received that tonics are to be regarded as an essential part of the treatment, and that they should be administered from the first, in connection with the diuretics and counter-irritation.

Quinine and iron are probably the most serviceable.

PARAPLEGIA.

A woman has been the subject of this infirmity for six or seven years, and has been taking medicine almost constantly in the hope of obtaining relief. About six or seven weeks ago she began to receive hypodermic injections of strychnia. At first they were given in $\frac{1}{60}$ gr. doses night and morning. These doses have been gradually increased up to $\frac{1}{30}$ of a grain night and morning. Since the use of the strychnia the improvement in her case has been very marked. She is now able to draw her limbs up in bed quite well, one or both, as may be desired. Electricity, which had been employed in connection with the treatment she had previously been receiving, was continued in connection with the treatment by hypodermic injections of strychnia.

ACUTE ARTICULAR RHEUMATISM.

The constitutional treatment adopted in this hospital for this disease is essentially alkaline. Rochelle salts are very commonly employed. Effervescing draughts are also ordered, as being more agreeable to some patients and equally efficacious. The local application ordinarily used is what is known as Fuller's lotion, which consists of bicarbonate of soda and laudanum, and over this cotton and oil-silk.

MORBUS BRIGHTII.

The chief elements entering into the treatment of this disease are tonics, diuretics, and diaphoretics. It is quite commonly the case that the patient is not seen by the physician until some dropsical symptoms have made their appearance, such as slight puffiness about the eyes, or slight swelling about the ankles. It is the "dropsy" that has alarmed the patient. In such cases quinine and tr. chloride of iron, associated with infusion of digitalis in combination with bitartrate or acetate or citrate of potassa, constitute the remedial measures ordinarily employed. If there is much œdema, the hot-air bath is called in to assist, and occasional doses of the triplex pill,

℞. Pil. hydrarg.,
Res. scammon.,
Pulv. aloes..... āā grs. x.
M.

Div. in pill No. x.

are administered.

PURPURA.

A most marked, a classic case of this disease was present. It was one of those cases which physicians are inclined to call beautiful, sometimes much to the chagrin of the patient. The lower extremities, particularly, were covered with an eruption which made them model specimens. The treatment of the case consisted in the administration of citrate of iron and quinine and bicarb. potass., given in the form of effervescing draughts. The patient was also ordered to eat large quantities of cabbage and spinach.

CHARITY HOSPITAL.

STRANGULATED HERNIA AND THE ASPIRATOR.

Another of these hernia cases was discovered about three hours after the patient had been admitted to the hospital for some other difficulty. In her journey to the hospital the hernia had come down enormously and become strangulated. The hernial tumor was as large as a child's head. It was hardly possible to determine what kind of hernia it was, the tumor, when freed, was of such size and tension. Taxis was unavailing, and probably would have been equally unavailing had a correct diagnosis been made, and taxis been made in the proper direction. Taxis was made in the direction proper for the reduction of an *indirect* inguinal hernia, but the sequel proved it to be

a *direct* inguinal hernia. This is a mistake not so infrequently made as may be supposed. Taxis in this case being unsuccessful, the tumor was aspirated, and fully ℥viij. of serum drawn off. The gut was not aspirated. The removal of this quantity of fluid rendered the tumor sufficiently flaccid to permit a much more easy and extended manipulation, assisted in arriving at a correct diagnosis, and by a little careful and well-directed handling the hernia was reduced. An operation was probably avoided by means of the aspirator.

NOCTURNAL PAINS.

A majority of the cases of nocturnal pain can be rid of their remorseful reminders by the administration of iodide of potassium in free doses; but occasionally one presents itself in which either the demon's fang has penetrated more deeply, or the patient is more susceptible to grievances, and these "nocturnal aches" will scarcely yield to the single-handed onset of iodide of potassium. In these rebellious cases Dr. Drake, now in charge of the venereal service, administers with the happiest results a combination of three iodides. The formula which at present is used is as follows:

℞. Potass. iodid. ..... ℥ iv.
Sodæ iodid. ..... ℥ iij.
Ammonium iodid. ..... ℥ ij.
Tr. gentian co. ad. ..... ℥ ij.
M.
S. ℥ i. t. i. d.

HYDROTHORAX.

With regard to the operation of paracentesis thoracis there is a difference of opinion relating to the time of its performance. One class of observers are of the opinion that the fluid should be drawn off, unless it yields to treatment, within two weeks, for the danger is that the fluid may become purulent instead of remaining serous. There are many cases, however, in which pus-corpuscles can be found in the fluid, but which would not be entitled to the term empyema. Other observers, on the other hand, are of the opinion that drawing off the fluid should not be resorted to early. Their reason is, that purulent effusion into a pleural cavity is fatal in nearly one-half of the cases, and when spontaneous opening of the wall of the chest takes place, a very large proportion of those cases get well, while less than one-half of those cases operated upon recover.

Progress of Medical Science.

DOSMETRIC MEDICINE.—Professor Burggraeve, of Ghent, has devoted himself lately to the extension of what he has called dosmetric medicine. This consists in the administration of remedies of the most potent kind in doses ready prepared by pharmacists in the most convenient form. They are, in fact, very tiny pilules, and a case of these may very easily be carried in the pocket. The learned professor—says the editor of the *Med. Press and Circular*.—has quite taken the wind out of the sails of the homœopaths.

His idea is that immense improvements should be introduced in practice—the employment of simple medicines of the *highest purity* and of *strictly uniform composition*, prepared with the greatest care and administered with almost mathematical precision. The form of granules, as he calls these little pilules, renders the medicines easy of administration to even the most delicate patients.

PRESERVATION OF HUMAN REMAINS.—In the Italian section of the Vienna Exhibition, Dr. Marini exhibits, among an assortment of human feet, hands, legs, arms, and busts of shrivelled proportions and deep-brown color, a large, round plateau, evidently of hard and polished material, which has been likened to stale gelatine or potted boar's-head. It is a conglomerate of specimens, illustrative of an art invented by him—the petrification and mummification of human corpses. It was this Dr. Marini who petrified Mazzini, and executed the work so well that the admirers of the arch-conspirator proposed to set up the corpse in the Capitol and save economical Italy the expense of a statue. The doctor's preparations are weather-proof, and will not only stand wear, but take on a high degree of polish. His mummified specimens, by a process known to him alone, can be restored to their original size and elasticity; while the petrified ones are as hard, and possibly as durable, as granite. The top slab of the table is composed of muscles, fat, sinews, and glandular substance—all petrified together in a block, the surface of which has been planed and polished till its face resembles marble. Certificates from Nélaton and others are attached to the specimen limbs, setting forth that the limbs in question had, for the satisfaction of the certifiers, been restored to their pristine softness and pliability by Dr. Marini.—*The Lancet*.

WHAT ARE THE SIGNS OF CONGENITAL SYPHILIS?—In a paper read before the Harveian Society of London (*Lancet*, May 24), Dr. Thomas Ballard discussed the subject of congenital syphilis, and endeavored to show that those conditions before birth, at birth or some time after birth, which have been supposed to depend upon a syphilitic taint, can be explained by simpler and more obvious means. Acknowledging that a woman infected with syphilis is apt to abort and bring forth dead children, he denies that this is from the direct effect of the virus upon the fœtal organism, and asserts that "the death of the fœtus in utero is the consequence of some defect in the maternal system, resulting from its contamination by the syphilitic virus, and that it is not necessary to infer, neither is there evidence to prove, that the organism of the child is intrinsically affected by it." He believes pemphigus and other forms of erysipelatous disease, occurring within a fortnight after birth, to be pyæmic affections resulting from unhealthy suppuration of the umbilicus; and the coryza, thrush, and ophthalmia of newborn children to be due to external irritants, as cold air, sore nipples, and exposure to light. He thinks the cutaneous inflammations about the buttocks and thighs are usually caused by the contact of moist and frequently unclean flannel, and relates cases where such troubles disappeared in a few weeks after the mere removal of the napkins, though they had resisted anti-syphilitic treatment for many months. He concludes that "the records of cases of living children having been born with manifestations of syphilitic disease are so few as to allow of the supposition that they are not trustworthy," and that "the symptoms which are developed some weeks after birth, and are relied upon as pathognomonic of syphilitic contamination of the system of the child, are mere accidents arising from certain unfavorable conditions to which the child is exposed, and that they are all preventable or easily cured when the cause producing them is recognized."

Arsenical Disease, or the Disorders produced by Arsenical Papers and Colors.—In the *British Medical Journal* of June 21, a paper appears by Wm. M. Clarke, Esq., of Bristol, on the above subject, who says: "I had not, until the last two years, traced any disease to the use of these colors. During that period, however, I believe I have met with several cases, and have become convinced that arsenical pigments are very frequently the cause of troublesome complaints, which, unless the cause be detected, are very difficult to cure.

"There are two principal ways in which they do harm: in the first and most obvious way they produce the disorder for which the patient comes under treatment, and there is nothing else the matter; but in the second, the danger is more insidious, and on that account the greater. The patient is laid up by some ordinary malady, confined to the room infected with the arsenic, and then there are gradually, and in a most deceitful manner, added the symptoms that the arsenical contamination produces. In this class of cases, in which the poison merely modifies some other disease, it is difficult to define the characteristics; but the most marked I have noticed have been sickness and vomiting, sore throat, sore eyes, and occasionally eczema and diarrhœa. On the other hand, in the first class the signs are well marked. First, there are the cases in which the patient suffers the usual symptoms of dyspepsia; there are more or less nausea or sickness, a troublesome cough, capricious sore throat, and redness or soreness of the conjunctivæ. In a second group nervous symptoms predominate; there are headache, prostration, and marked restlessness and excitement at night; generally, also, more or less decided gastric symptoms, and especially a very coated tongue. As regards a third group, and the most common, I must say that until the last year or two I should not have attributed the mischief to arsenical poisoning, but should have called the cases low fever, or perhaps have supposed them to have been cases of aggravated dyspepsia. I have more than once isolated such patients, thinking they were about to have typhoid; or when sore throat has predominated, scarlatina; and finding them become worse when confined to their bedroom, I have had them removed, and they have recovered. In these there have been great prostration, headache, wakefulness, great nervous excitement, often an irritable stomach, and always a very coated tongue with red edges—very much the symptoms of slight typhoid, but without elevation of temperature and with only slight quickening of the pulse. . . . .

"These three classes include the most of the cases that I have seen; but other conditions are, I believe, sometimes produced, such as violent and intractable sneezing, eczema, and sores of the mucous membrane of the nose.

"In the case of one patient, whose illness was due to this cause, a careful analysis of excreta from the patient, and dust from the bedroom, which was decorated with arsenical paper, showed the following results:—

	White arsenic.	Scheele's green.
1. 100 grains of dust from top of wardrobe =	0.2	.36
2. 100 " " " " same room..... =	0.16	.30
3. Expectoration.....	Trace	Trace
4. 48 ounces of urine..... =	0.26	.5 "

Etiology of Hereditary Syphilis.—Frederick R. Sturgis, M.D., of New York (*N. Y. Med. Journal*, July, 1873), in a lengthy paper on "Etiology of Hereditary Syphilis," shows that the paternal transmission is impossible on these grounds:—

1. Because the reported cases are wanting in such details as to render them convincing.

2. Because this theory is entirely opposed to our present knowledge of the contagious properties of syphilis and its mode of propagation; and

3. Because our knowledge of infantile syphilis has not kept pace with our progress in the other branches of the disease.

He thinks the proposition stands thus: Both sides grant the contagions of a primary lesion and of mucous patches; one side further argues that the semen of a person in whom the disease is either present or latent is also capable of conveying the poison; the other side demurs, and offers as proof against this argument the fact that many cases exist where the syphilitic father has perfectly healthy children, and in this connection the mother is found free from disease. The first side say this is possible, and go further yet; notwithstanding that this poison is eminently virulent and dangerous for those previously free from its influence, they insist that a perfectly healthy woman may and does receive this poisoned semen into her body, a diseased fœtus is carried by her for the nine months of intra-uterine life (the relations between the two being of the most intimate character for that length of time), she nourishes this rotten product, which, when born, may become a centre of contagion to those about it, and yet escapes contagion. If this be true, then one of two things: either we are ignorant of the real condition of the mother, or else syphilis is not the contagious disease which we have been accustomed to consider it. He urges new and independent observations. Both the parents and the children should be examined and watched for some time before we may conclude one way or the other; but above all things let physicians cease copying old and poorly reported cases, and observe anew for themselves. In this way only can we hope to arrive at some definite conclusions upon this important subject.

Compression of the Brain.—S. W. Gross, M.D. (*Am. Jour. Med. Sciences*, July, 1873), remarks that the treatment of compression from depressed bone is still a matter of much dispute. That a man may recover from a very considerable and very unequal displacement of the tables of the skull, is attested by numerous examples; but that such cases survive in greater proportion than those in which the pressure has been relieved by the resources of art, is another and highly important question which has not been sufficiently examined by writers on army surgery. Of 224 depressed gunshot fractures of the skull, and in 90 operative measures, of these 45 or 50 per cent. died. Of 134 instances, on the other hand, in which the treatment was purely conservative and antiphlogistic, and in 43 of which the signs of compression were very doubtful, 61 recovered, and 73, or 54.47 per cent. died; or if the doubtful cases, which resulted in 10 deaths, be excluded, 91 cases of compression from depressed fractures, treated expectantly, afford 63 deaths, or a mortality of 69.23 per cent., a result in favor of operation by 19 per cent.

These statistics show, that when symptoms result from depressed bone, the chances of saving life are on the side of surgical interference. The trephine was applied in 49 of the above 90 operations, with 26 deaths, the mortality being 53.06 per cent.; fragments of the shattered bone were removed by the forceps in 28 instances, with a fatality of 14, or 50 per cent.; the elevator was resorted to in 10, of which 3, or 30 per cent. were mortal; while in 3 instances Hey's saw was followed by death in 2, or 66.66 per cent. An

examination of these facts does not disclose that the operation of trephining is more dangerous than other operative procedures. More patients recover after than without surgical interference, and many lives might have been saved by a timely resort to it.

A Little-recognized Cause of Relapse of Vesico-vaginal Fistule.—M. Bourdon speaks of a newly recognized cause of recurrence of this affection which merits attention. It is pregnancy, which in the early months can cause spontaneous rupture of the cicatrix of a vesico-vaginal fistula, even so long as six years after its cure. This relapse is owing to the changes in the nutrition of the tissues belonging to the pregnant condition. The vagina becoming varicose during gestation, the rupture of the cicatrix of a vesico-vaginal fistula resembles the spontaneous rupture which takes place in the cicatrix of a varicose ulcer of the legs. This varicose condition of the vagina, moreover, favors the production of phlebitis and pyæmia, and for this reason the author advises refraint from operative procedures during pregnancy and for some time thereafter.—*Gaz. Méd. de Paris*, No. 30.

Simple Method of Detecting Impurities in Water.—Dr. Reynolds, of Dublin, recommends a simple method which, he says, serves to detect the presence of organic matter in water. A pint of the water to be examined is to be placed in a clean bottle of white glass, together with a piece of white loaf-sugar the size of a pea. Being then exposed to sunlight in the window of a warm room, if at the end of eight to ten hours the water is cloudy it contains organic matters, probably derived from sewage, which have been developed owing to the presence of the sugar.

Tuberculosis and Humanized Lymph.—In a correspondence of the *Gaz. Méd. de Paris* of April 26th, there are some propositions formulated by Drs. Paraskera and Zallones, of Greece, concerning repeated experiments made by them of inoculation on rabbits, of vaccine virus taken from persons in the second stage of phthisis. From these they think that it seems as if tuberculosis were transmissible by vaccine.

Here are their words:—

"1. The animals on whom the experiments were made were in the most healthy condition.

2. Vaccine taken from a tubercular person may produce tuberculosis in one (animal) that enjoys perfect health.

3. The blood of persons with cavities in the lungs carries with it the tubercular virus, and this poison is found in the liquid and solid part of the blood.

4. Fourteen days sufficed for the development of the tubercle in the animals affected."—*The Doctor*, July 1.

Galega Officinalis as a Galactagogue.—Dr. Oettinger (*Il Morgagni*) recommends the employment of this legumen to excite the secretion of milk in nurses, being convinced by a great number of observations that the *galega officinalis* not only augments the quantity but also improves the quality of milk in women who are nursing. It is given in the form of syrup, to the amount of several teaspoonfuls during the day.—*Lyon Méd.*

Use of a Goose-quill for Catheterization of a Female.—Dr. Grabinski writes to the *Lyon Méd.* that in an emergency a goose-quill three inches long enabled him to draw more than two *litres* of urine from the over-distended bladder of a female. Ordinarily if the proximal end of the quill is not cut, its conical form will enable it to be introduced without difficulty; but in this case the only quill available had to have a plug of wood adapted to it in order to prevent its sharp edges catching the mucous membrane of the urethra.

Fractures of the Inner Extremity of the Clavicle.—Delens understands this to mean such as take place within the inner third of the clavicle, that is to say, in the limits of insertion of the clavicular fascia of the sterno-mastoid. In 1864 this writer published two cases of this nature in the *Gaz. des Hôp.*, since when he has observed six others, which together with the twenty already published make twenty-eight cases, of which twenty were males. Of the eight cases observed by him, in seven the fracture was on the left side. The fracture is more often oblique above than below, the periosteum is more frequently intact, and consequently overlapping and shortening is less marked.

Among the known causes, indirect violence—such as a fall on the shoulder—has been the most frequent of those due to external violence, two cases having been mentioned in which the blow occurred at the seat of fracture; but the most common cause was muscular contraction, being mentioned in eleven cases; the contraction of the sterno-cleido-mastoid is the best condition for producing the fracture, which ordinarily occurs in a violent effort to raise a heavy body by the aid of both hands. Twice the accident has occurred in giving a stroke with a whip. Tumefaction and deformity are most pronounced in the fractures produced by muscular contractions and are scarcely marked in the others. Mobility and crepitation are to be noted in almost all cases.

Pneumatic Aspiration in Hydrarthrosis of the Knee-joint.—Dr. Rasmussen, of Copenhagen, describes seven cases in which he practised aspiration in eight knee-joints. In none of these cases did the slightest trace of inflammatory reaction follow the operation. Even in the cases where there had been severe pains and considerable tenderness of the joint, it was so free from both for several days after the operation that treatment by *massage* could be employed for the removal of the remainder of the effusion. He advises the operation in both the chronic and acute forms of this affection.

The following is Dr. Rasmussen's mode of operating: Broad strips of adhesive plaster, clipped at the ends, are applied above and below the joint, and are then gradually tightened according as the evacuation of the fluid by suction, which takes place very slowly, proceeds. By the continued application of adhesive plaster the fluid is forced towards the canula.

This should, as a rule, have a diameter of from .08 to .06 of an inch, so that the viscid portion of the fluid can pass through it. At first Dr. Rasmussen made the puncture through the extensor muscles, in the highest pouch of the capsule, for fear that the fluid would continue to ooze through the comparatively large opening if the latter were to be made at a lower level. This subsequently, however, was found to be both unnecessary and inexpedient, for by this plan the fluid could with difficulty be all drawn off, and the puncture is now made in an upward direction at the external edge of the patella. After the removal of all of the fluid, the opening is closed with charpie and collodion, and the last strip of plaster is applied in the centre, and thus the joint is compressed and placed at rest. To secure rest more completely, the leg is bandaged and an ice-bladder is applied to the knee, although the latter is thought to be, perhaps, superfluous.

Occasionally slight œdema of the foot and ankle follow the operation; but clipping of the plasters, and so loosening them, causes it to disappear. The band-

age may be removed at the end of three or four days, and the fluid will commonly have disappeared. When it has recurred it is in less amount, and the joint is quite free from pain.

The utmost care is essential in disinfecting the trocar, and in operating in a locality where there is neither pyæmia nor erysipelas.

Carbazotate of Ammonia.—Dr. Dujardin Beaumetz recently reported to the *Société de Thérapeutique de Paris* the results of his investigation of the character of this combination of ammonia with carbazotic, pieric, or trinitrophenic acid, and especially with reference to its use as a substitute for sulphate of quinia. After mentioning the successful employment of this salt in the treatment of intermittent fever by several persons, Dr. Beaumetz detailed six cases treated with like result by himself, and also mentioned the results of experiments made upon both men and animals. Like quinine, carbazotate of ammonia diminishes the strength of the pulse and induces languor, cephalalgia, and even delirium, and finally is eliminated by the kidneys. The Doctor thinks that one-third to two-thirds of a grain daily will suffice to suppress the paroxysm of intermittent fever, and says that, given in these doses, the drug has not been known to produce bad effects; indeed, it seems to be better tolerated than sulphate of quinine, the physiological action of which it resembles.—*Med. Press and Cir.*, May 7.

Transplantation of the Marrow of Bone in Sub-periosteal Amputations.—Mons. G. Félizet, at the meeting of the *Acad. des Sciences* of June 30, presented the results of two series of experiments of the above nature,—the first, in the case of an operation upon a wounded man, twenty-six years old; the second, experiments upon dogs.

1. Transplantations of marrow in a "muff" formed by the periosteum of long bones, presented the condition most favorable for the success of the graft.

2. The occlusion of the grafted marrow in this manner, under a "muff" nicely closed with sutures, results in covering the bony stump by an anatomo-pathological process identical with that which governs the formation of a calculus, first cartilaginous, then osseous, in simple fractures.

3. The accidental opening of the "muff" does not render the success of the graft impossible, but makes it incomplete, and favors the exit of a portion of the transplanted tissue, preventing the formation of the cartilaginous masses. It also excites osteomyelitis in the same way as simple sections of bone in ordinary amputations when exposed to the air.—*Mouvement Médicale.*

Albuminuria as a Symptom of Meningitis.—Professor Rosenstein has noticed the coincidence of albuminuria with meningitis. The analysis of their urine demonstrates in nearly all patients, whether old or young, attacked with meningitis, the presence of albumen in the early days of the cerebral affection; and in a considerable number of these cases is found at the same time, among the products of the renal secretion, epithelial cells, blood-globules, and fibrinous casts, exactly the same as in Bright's disease. The lesions discovered by post-mortem examination of the kidneys are likewise similar to those of albuminous nephritis. The kidneys are increased in size—the hypertrophy being chiefly in the cortical substance; the renal tissue is markedly injected; the glomerulæ gorged with blood, and there are extravasations of blood into the urinary tubules. Professor Rosenstein attributes these lesions to troubles in the circulation due to functional alteration of the vaso-motor nerve-filaments. This fact is likely to be of considerable value in diagnosis.—*Lyon Méd.*

Experiments on Blood-corpuscles.—At the recent meeting of the British Medical Association, Dr. Norris, of Birmingham, showed some beautiful experiments illustrative of his views regarding the formation of rouleaux by the blood-corpuscles, and the passage of the corpuscles through the capillary walls. A number of thin cork disks were so weighted with shot that, when placed in a jar of water, they maintained a vertical position below the surface, exhibiting no tendency to form rouleaux. When removed from the water, dipped in paraffine oil, and again placed in the water, the disks formed rouleaux, just like the blood-corpuscles. This phenomenon Dr. Norris ascribed to the repulsion between the paraffine and the water, and the cohesive attraction which the disks covered with paraffine had for each other. He inferred from this experiment that when the blood was withdrawn from the body the corpuscles underwent some alteration which led to repulsion between them and the plasma, and the corpuscles ran together in virtue of cohesive attraction. Sometimes, however, the blood-corpuscles do not run together in the form of rouleaux, but give rise to irregular, conglomerate masses, which Dr. Norris imitated very successfully by means of soap-bubbles side by side on a piece of glass. Dr. Norris maintained that the passage of the blood-corpuscles through the capillary walls was not due to amœboid movements, but to the action of cohesion. That it is not due to the former is supported by the fact that red corpuscles, which possess no amœboid movement, penetrate vascular walls equally well with leucocytes. He produced a soap-film about a foot in diameter, and permitted a large soap-bubble to fall upon it; the bubble passed half through the film. He then applied the mouth of a wet beaker to the bubble, and, in virtue of cohesive attraction between the wet glass and the bubble, the latter, as it were, crawled through the soap-film into the cavity of the beaker, leaving the film intact. A wet orange was repeatedly dropped through the film, and the doctor also passed his hand through it and removed it without producing any rupture. The film was compared to a capillary wall, the bubble to a corpuscle, and the beaker to the interstice of some organ outside the blood-vessel.

Experiments upon the Brain.—At the same meeting Dr. Ferrier experimented upon the brains of a cat and monkey. After removing the calvarium and dura mater he faradized various portions of the convolutions in succession. In applying his electrodes to the several convolutions, Dr. Ferrier predicted movements, for example, of the foot, the shoulder, the ear, the mouth, the eye, the head, etc.; and almost always the predicted movement occurred. According to Dr. Ferrier, instead of the cerebral convolutions being exclusively the seat of the intellectual operations, it appears that they are for the most part the nerve-centres for various muscular movements which can be called forth by stimulating them with electricity, just as if they had been excited by volition. The cerebellum, whose function has been much disputed, is found by Dr. Ferrier to be the motor centre for the muscles of the eyeball.—*Br. Med. Jour.*

Hoppe-Seyler's Process for Detecting Bile-salts.—"Precipitate with subacetate of lead and ammonia; wash the precipitate somewhat with water; boil precipitate with alcohol, and filter hot. (The alcohol takes out the bile-acid salt of lead.) To this solution, after filtration, add enough solution of caus-

tic soda to decompose all the bile-acid salt of lead. (We now have a bile-acid salt of soda.) This solution is to be evaporated to dryness; residue to be extracted with absolute alcohol. (This takes up the bile-acid salt of soda, leaving the lead behind.) Filter. Precipitate filtrate with excess of ether; allow to stand; pour off supernatant fluid; dissolve precipitate in water, and apply Pettenkofer's test. Much care is needed in this; for some lead flows on closely throughout."

Prognosis of Syphilis.—F. R. Sturgis, M.D. (*Am. Journal of Medical Sciences*), in an important article on this subject arrives at the following conclusions: 1st. That syphilis is a self-limited disease, and the patient, if blessed with a sound constitution, will, in the average of cases, get well, even if left untreated; but this course exposes to great and serious risk. 2d. That some general idea may be formed as to the future from the character of the earlier lesions; this rule, however, is not absolute, as some cases do occur where the early stages are slight and the subsequent ones severe. They are, nevertheless, he thinks, exceptional. 3d. That as the disease progresses, the prognosis is less favorable, more especially where important organs are attacked, such as those of the nervous or arterial systems; and, 4th. That in forming an opinion, due regard must be given to the age and general health of the patient; and in the treatment attention must be paid, besides the proper use of specific remedies, to strengthening the patient, if debilitated from any cause whatsoever.

The "Wet Pack" in Eclampsia connected with Albuminuria.—Isaac G. Porter, M.D., New London, Conn. (*Am. Jour. Med. Sciences*, July, 1873), in a paper "On External Diaphoretics, particularly the 'Wet Pack' in Eclampsia connected with Albuminuria," states the "wet pack" is not inconsistent with the simultaneous use of other active medication. Bleeding may be practised when called for, as in any other disease; cupping the loins may precede, to relieve hyperæmia of the kidneys; cold may be applied to the head, or hypodermic injections of morphia administered, or œnemas of chloral hydrate, or, if the patient can swallow, bromide of potassium or tartrated antimony.

The author, in closing, remarks as follows: "My object will have been attained if I have brought prominently forward a remedy in puerperal convulsions not entirely novel, yet one too much neglected and overlooked, and valuable, doubtless, in all cases attended by albuminuria. Where labor is nearly completed we may not care to resort to it; but it is eminently useful when other means are exhausted, or are inappropriate to the case."

Hypodermic Injection of Strychnia in Progressive Locomotor Ataxia.—W. B. Drinkard, M.D., Washington, D. C. (*Am. Jour. Med. Sciences*, July, 1873), infers from the facts of a single case, that strychnia offers at least as much chance of amelioration in locomotor ataxia as any other remedy that has yet been tried in this disease, and that its benefits may be more promptly and decidedly obtained by the hypodermic method than by its internal use. The amount may be increased far beyond what he used in the case recorded, gr. $\frac{1}{32}$ twice daily, and with proportionate increase of beneficial effect.

That without denying to morphia, especially as administered hypodermically, its place as the sheet-anchor in this terrible disease, whose characteristic pains will yield to nothing else apparently, the practitioner must yet be even more on his guard in administering it than is usually done. For even if there be not a special tolerance of opium and of all sedatives and narcotics in locomotor ataxia, as there probably is of strychnia in this and other conditions of nervous tissue-change, the severity of the pain itself may increase its toleration and encourage the continued use of larger and larger doses, until, finally, relief can only be obtained by an amount conceivably incompatible with life, or the patient sinks, killed as much by the drug as by the disease.

Absorption of Two Inches of the Shaft of the Femur.—Frank K. Paddock, M.D., Pittsfield, Mass. (*Am. Jour. Med. Sciences*, July, 1873), reports a case of this character—the patient being a female, æt. 59—because he believes it establishes the fact that there may be local osteitis, with absorption of the mineral portion of an entire section of a long bone, without the formation or deposition of any fibrinous or plastic material, or other product of inflammation, either in or adjacent to the diseased bone.

Ergot in Nervous Diseases.—Daniel H. Kitchen, M.D., Asst. Phys. to the N. Y. State Lunatic Asylum (*Am. Jour. Insanity*, July, 1873), after repeated investigations, finds that ergotine and Squibb's fluid extract of ergot are beneficial in nervous diseases. In the following forms of headache he has used ergotine with much benefit and comfort to the patient: (1.) Headache depending on plethora or fulness of blood. (2.) Headache from anæmia. (3.) Headaches depending on changes in brain-substance and the membranes. (4.) Epileptic headaches. (5.) Migraine. (6.) Headache depending on disordered menstruation. The author presents ten cases of epilepsy and insanity in which marked and beneficial effect was noticed following the use of Squibb's fluid extract of ergot and ergotine, either alone or in combination with sulphate of quinine and other remedies.

Ergotine may act in two ways: first, directly on muscular fibre, in the same way as any other stimulant; second, through the nervous system, principally the ganglionic. The immediate effect of ergotine on the blood-vessels is marked and rapid; the pulse is increased in force and volume; the slow and wavering pulse becomes full and strong. The power of ergotine is manifest, from its value as a hæmostatic in reducing the size of blood-vessels.

Presence of Alcohol in the Human Urine.—After having shown that urine on putrefying produces alcohol, M. Béchamp has sought to discover alcohol in the urine of persons who had previously been subjected to a *régime* of abstinence from wine and alcoholic drinks. In the urine collected in these conditions, and in which fermentation had been prevented by the addition of a little creosote, M. Béchamp has found enough alcohol to be able to set it on fire. In one of the experiments there was enough alcohol in two litres of urine to be determined by the alcoholometer. The author believes that the liver produces alcohol physiologically.—*Bordeaux Méd.*

A Peculiarity in Hospital Construction.—In announcing the inauguration of a new hospital at St. Petersburg, designed by the architect Bernhardt, the *St. Petersburg Journal* remarks a disposition shown by the physicians of Northern Europe to attribute value to the influence exerted by a sojourn among animals upon phthisical persons. The division of the hospital occupied by phthisis patients is to be in constant communication, day and night, with a stable in which fine breeds of milch cows are kept.

THE MEDICAL RECORD:

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THE MEDICAL CHARITY QUESTION.

Our remarks upon the abuses of medical charities have called forth considerable correspondence from many of the younger members of our profession. The number of letters from different quarters, not only shows how widespread is the evil, but how universal is the desire for some remedy. If many of the epistles were presented to our readers, it would be seen that we have made a very mild statement of facts, and that the troubles of the young and struggling practitioners were far from being exaggerated. In referring to some of these we shall only confine ourselves to the statements of those gentlemen known to us whose opinions are founded upon extended observation.

One of these gentlemen complains that, although having a dispensary class, and doing more than his share of charity business, his income from private practice is so ridiculously small that he actually envies the profits of the cartman who is his next-door neighbor. He attributes this condition of things mainly to the fact that he is not allowed to reap any advantage whatsoever, directly or indirectly, from his dispensary class; that patients who are regular attendants upon him during his class-hour, and who are willing to pay something, must not know from him how they can enjoy such a privilege. In this regard he sacrifices his needful pecuniary gains to what the directors call a point of honor; and that these directors, bent upon what they call the prosperity of the institution, are too apt, by the manner in which they ignore any outside privileges of the young physician, to quench any desire on the part of such patients to pay their small fees at his private office.

Another gentleman, while complaining of the same thing, suggests a remedy which strikes us is a good one, and which would apply equally to those who are able to pay good fees and to those who would like to give what they could afford to help discharge their obligations to the doctor. It aims, in the first place, at preventing any unworthy patient from gaining admission to the physician's room. The particular person —be he house-physician, trustee, or director—who enters the name of the applicant and assigns him to a particular class, can generally judge whether it is a true charity case or not. If he have any doubts concerning the matter, he is warranted in asking the question as to the means of the patient, or in stating his suspicions, and if satisfied that his suspicions are well founded, to refuse the benefits of the institution to that individual. In many cases there may be a good excuse for a patient applying for relief at a public institution who would be willing to pay the physician for his services. Take, for instance, a stranger who comes from the country for advice, and whose only means of knowing that he will not fall into the hands of a charlatan is the application to a public institution of standing and reputation. If such a person can pay, he can very easily be satisfied that he can get the advice of any of the physicians of the institution at their private offices. In order that no partiality be shown to the different members of the staff, it could be so arranged that all paying applicants should be evenly distributed. A simple and satisfactory way to do this would be to give all such patients who might apply a given day to a given physician or surgeon. This is a suggestion which comes from a gentleman who has served long enough in one of the public institutions to know what is wanted in the premises, and we commend it to the consideration of his brethren.

Another gentleman complains that those physicians in his neighborhood who are accustomed to large fees, are in the habit of sending the patients, who cannot come up to their tariff of prices, to the public institutions rather than to the poor practitioner around the corner. He very reasonably remarks that this is wrong, no matter what might be said of the necessity of keeping up the dignity of professional labor. The practitioner who makes a great deal of money, throws away his crumbs to a false charity, which would be the very sustenance of the struggling brother. It is unfair to suppose that this is done out of jealousy or malice, but from pure thoughtlessness and unpardonable forgetfulness on the part of these same nabobs of their own wants when they commenced business. We cannot see how the dignity of professional services would suffer by allowing a poor but honest patient to pay what he could towards discharging a debt of gratitude to one whose very bread and butter depends upon an aggregation of just such small fees. The poor practitioner is willing to accept the situation, and the patient is made to feel the better for it. No one has a right to say that if a patient cannot pay a particular price for a purely professional service, he must have it for nothing; but if the physician is not satisfied with any

thing less, his duty is to refer the case to a younger brother, whose want does not make him suffer in his conscience for an occasional violation of an arbitrary rule. The fact is, he is willing to take what he can get, rather than get what his dignity allows him to take. The moral of all this is: Medical aristocrats, men who despise small fees, recollect your younger brothers around the corner, and do not forget how you had to commence practice yourselves.

Another "Struggling Practitioner" wishes to call attention to the relations which the druggist holds to the question of medical charity. He maintains that while the medical man is willing to take small fees, the druggist makes no allowance whatever, adheres to a standard price, and that not unfrequently the medicine costs more than the advice. There is altogether too much truth in this. Pharmacists as a rule are not considerate enough to those who cannot afford to pay their prices. They place a high estimate upon the skill necessary to compound a prescription, and this gives them a wide latitude of conscience for exorbitant charges. When it comes to the question of skill in compounding, is a higher estimate to be placed upon that than upon skill in diagnosis or treatment, for which the poor physician is willing to take what he can get? We believe that there is always an opportunity for the pharmacist to make a decent allowance for the poor; for in the majority of cases the medicines used in a prescription cost very little indeed, and not unfrequently the bottle and cork are the most important items. The abstract profits from prescriptions are immense, and when we consider how adverse pharmacists generally are towards lowering their standard of prices to the poor, we often feel as if they should not enjoy the patronage of the profession. In fact, the physician, knowing how little of mercy he can expect from some of these pharmacists, is compelled to cut down even small fees to make it bearable to his poor patients. Moral: Struggling practitioners, do not prescribe much medicine for those who cannot afford to pay much for advice; generally it will hurt none but the druggists.

Reviews and Notices of Books.

MIND AND MATTER, OR, PSYCHOLOGICAL INQUIRIES. SIR BENJAMIN BRODIE, Bart. With notes by an American Editor. William Wood & Co. New York, 1873.

THE new edition of this little volume is of less value, coming as it does after the much more complete works that have recently appeared on the same subject,—notably Tuke's discussion on Influence of the Mind upon the Body. We do not agree with the author that "the method of dialogue seems to be especially adapted for inquiries of this description." We think, on the contrary, that it tends to encourage a vague and rambling style of thinking that does not even propose to itself to arrive at any definite conclusion, unless indeed the dialogue be controlled by the strict rules of the Socratic method,—and even then it is only adapted to the successive deduction of principles, rather than to the exposition of facts. These Dialogues touch upon the processes of mental exertions, the relations of the mental principle to the organization, the nature of memory, the various functions of the brain and spinal cord, the mental faculties of animals, and finally the science of human nature as a whole. The view is accepted, which has been so forcibly expounded by Brown-Séquard in one of his lectures at Harvard, that the brain must be considered as a congeries of organs, as distinct as those existing in the abdominal cavity. It is inferred, merely from analogy, that special parts of the encephalon exercise the special functions of perception of colors or musical sounds, of memory, or speech; yet the mass of positive evidence that exists in regard to the localization of an organ of speech is not involved in the discussion. A distinction is made between an impression made upon the brain to which the attention is directed, and that to which it is not, the former alone being remembered. A too rapid succession of ideas or impressions, with incapacity of attention, is incompatible with correct reasoning, is in fact the very essence of intellectual insanity. The difficult question of moral insanity is touched upon, but not much elucidated. It is admitted, on the one hand, that a person may be under the influence of moral illusions quite analogous in nature and impetuosity to the propensity described as bulimia, which has led people to eat a leg of veal at a sitting, or even to devour raw cats, rats and dogs. But on the other hand it is "absurd and dangerous to hold that any one whom the dread of being punished might deter from the commission of crime is not a fit subject for punishment." A curious inquiry is raised concerning the possible utility of dreams, "one of whose effects may be to increase the activity of the imagination during waking hours." The theory of James Mill, that evolves the highest moral principles from the repeated association and combination of instincts and ideas, is substantially accepted in the chapter on the Social Instinct. This is superadded in man to those instincts which he shares with the inferior animals, and which relate to the preservation of the individual and continuation of the species. "The social instinct is in many respects in antagonism to the others, and is more efficient in proportion as the intellectual faculties are more perfect." The science of human nature is freed from the pretensions of phrenology, in some acute criticisms, but not very well defined, for the author admits that "it is a department of knowledge in which I will not say we recognize no leading principles," but in which none are laid down for the guidance of the student. On the whole this book, though well suited to amuse the summer afternoon of a cultivated amateur, will not add much to the information of either a physician, or physiologist, or psychologist.

HANDBOOK FOR THE PHYSIOLOGICAL LABORATORY. By E. KLEIN, J. BURDON SANDERSON, MICHAEL KOSTER, T. LANDER BRUNTON. In two volumes. Philadelphia: Lindsay & Blakiston. 1873.

THE book is divided into four sections. The first is devoted to Histology, and is written by Dr. Klein, the last three to Physiology. Of these, the first directs experiments in regard to the blood, the circulation, respiration, and animal heat (Burdon Sanderson); the second is on the functions of muscle and nerve (Michael Koster); the third finally discusses digestion and secretion (Lander Brunton).

The section on Histology is again divided into two parts: The first is on preparation of elements, blood-corpuscles, epithelium and endothelium, connective-tissues, muscular tissue, tissues of the nervous system. The second describes the preparation of compound tissues and organs, the vascular and lymphatic system, the organs of respiration, digestion, special senses, skin, cutaneous glands, genito-urinary apparatus; finally a special chapter on embryology, and another on inflamed tissues. The care and minuteness with which directions are given may be seen from a mere enumeration of the details considered. Thus, in regard to the elements of the blood, the student is taught how to observe the amœboid movements of the white corpuscles, to distinguish their varieties, to examine them on the warm stage, to feed them with coloring matters or fatty substances, and to study the effect on them of different reagents, including electricity. The demonstration of the sarcous elements of muscular fibre is thus detailed, "according to the method of Colnheim:" A muscular fibre of a frog, Hyrophilus, or crayfish, is exposed in a platinum capsule to a freezing mixture at a temperature of 6° C. to 8° C. After a short time the muscle acquires the consistence of wax. Fine sections are then made with a cooled razor, and are at once examined in a drop of serum under a thin-cover glass, care being taken to introduce slips of silver paper to avoid pressure. Such a preparation, seen under Hartnack's immersion objective, No. 10, exhibits the following facts: Circular or oval disks present themselves (cross-sections of muscular fibres), the margins of which are sharply defined and possess a double contour (sarcolemma). Within the sarcolemma a beautiful mosaic is seen, in which the triangular, four-sided, or pentagonal areas appear to consist of a dull-looking material, separated by lines which are brighter, more transparent, and refract light less strongly. A fresh section, obtained as above, may be placed for a few minutes in diluted serum, and then transferred for from 10 to 30 seconds to a half per cent. silver solution; finally washed in water slightly acidulated with acetic acid, covered in glycerine and exposed to the light. A preparation is thus obtained in which the sectional disks are colored of various shades, from clear yellowish brown to dark brown; clear white lines on a brown ground are seen with great distinctness, which correspond completely with the trellis-work of transparent lines seen in the fresh preparation, from which appearance we learn that the spaces of the mosaic are stained brown by silver.

In Part II., devoted to the preparation of the compound tissues, the first chapter contains a general but minute description of the various methods employed: sections of fresh tissues (for which Dr. Klein condemns the use of pith supports); sections after freezing; methods of hardening in chloride of gold, osmic acid, chloride of palladium, alcohol and chromium compounds; methods of embedding in wax and oil, or in gum and gelatine; methods of coloring with carmine, Beale's solution, aniline, picric acid; methods of mounting in glycerine, Canada balsam, Dammar varnish. An entire chapter is given up to methods of injection, during life and after death, of frogs and of mammalia, with Prussian blue, with carmine, with silver; finally is added a description of the instruments employed. After the chapters that describe the special examination of each tissue and organ, the study of embryology is outlined, "such points only being noticed as are of importance to the beginner." "According as the germ and the yolk exist separately from one another, or form a single body, eggs are subdivided into two large groups, mesoblastic and holoblastic eggs. The first include those of the bony fishes, scaly reptiles and birds; the second those of cartilaginous fishes, amphibia and mammals." The process of cleavage of the entire ovum is first studied in the mesoblastic eggs of the trout, then their cleavage cavity, then the cleavage cavity and lamellæ of the blastoderm of the chick.

The chapter on inflammation contains rules for the observation of changes going on in inflamed epithelium, endothelium, cartilage, bone, liver cells and cornea; finally in the tongue of the frog and in the tadpole's tail.

Dr. Burdon Sanderson's paper is characterized by the same minuteness and technical accuracy, by means of which the reader could almost imagine himself a student in the laboratory of the master, receiving verbal directions to guide him in each step of his experiments; directions that forestall all the difficulties he could imagine, and many that he would never think of. He is taught how to filter the blood of frogs and of mammalia, how to illustrate the properties of plasma and of fibrine, and of the so-called fibrine factors, the paraglobulin and fibrinogen. The deductions made from the ordinary classical experiments are corrected by the details of Heynsius's experiment, intended to demonstrate that "a considerable quantity of fibrine-producing material is contained while the blood is circulating, in the colored or colorless corpuscles."

Very careful rules are laid down for procuring hæmaglobin, methæmaglobin, hæmin, hæmatin, hæmatain, and for studying their chemical and optical properties, also for making quantitative analyses of the blood with reference to its corpuscles, serum, fibrine, principal coloring matter, albumen and salts. Another section describes the gases of the blood, the method of obtaining the blood for gaseous analysis, and the various apparatus used in the process; Alvergniat's, Geissler's, Frankland-Sprengel's. In the study of the circulation, much space is devoted to the kymograph and sphygmograph, and to the precautions to be observed in their use. Afterwards type experiments are detailed to demonstrate the effects of the influence of the nervous centres on the vascular system. These details include minute rules for destroying the cerebro-spinal nervous centres; for exciting the spinal cord in the frog or rabbit; for section of the medulla oblongata in the rabbit; for reflex excitation of the medulla in frog or mammalia; for excitation of the nerves of the external ear, of the cervical, sympathetic, and the splanchnic nerves. The sixth section is upon endocardial pressure; the seventh on the intrinsic nervous system of the heart; the eighth on its inhibitory and accelerator nerves. The last section is supplementary, and contains methods for investigating the mode of absorption by veins and lymphatics.

In the Part II. of the Physiological Manual, Dr. Koster "has aimed to limit the directions as much as possible to such observations and experiments as the student may be reasonably expected to perform for himself under due supervision." The ordinary phenomena of muscle and nerve are consequently dealt with at far greater length than are the properties of the central nervous system. The latter are imperfectly known, and the experiments upon which our knowledge rests are difficult and complex. "The former, on the other hand, may be studied with appropriate exactitude; the methods of experiment and observation are becoming year by year more physical in character, and the observations themselves fundamental in their nature, and having the widest bearing on all the higher branches of physiology, may for the most part

be conducted on frogs, be repeated any number of times without difficulty or expense, and so serve usefully as a means of training students in physiological study and inquiry."

The first chapter tells how to make a "nerve-muscle preparation, how to employ a lever to study muscular contraction, how to construct a moist chamber that shall keep the preparation damp without permitting the moisture to come directly in contact with it; finally how to select and arrange electrical apparatus, with details upon the electrodes, commutator, rheochord, marking lever, tuning fork, metronome, etc. The next chapter formulates the general properties of muscle at rest, its elasticity, reaction, transparency; the third describes various modes of stimulation; the fourth studies the phenomena of muscular contraction; the fifth, its wave; the sixth, tetanus and exhaustion. Other chapters demonstrate the natural electric currents in muscles and nerves, and in the latter the phenomena of electrotonus, stimulation, and negative variation. Experiments are prescribed to exhibit the functions of nerve-roots, recurrent sensibility (only existing in the higher animals), reflex actions (best studied in the frog), finally, certain functions of the encephalon.

Dr. Brunton's share in the manual is not less valuable, nor the information given by him less varied and precise. A long chapter is given up to the properties of albuminous compounds, of which a synopsis is quoted from Hoppe Seyler. This includes albumens proper, globulins, fibrines, albuminates, acid albumen or syntonin, amyloid and peptones. To these are added leucine and tyrosine, and for all are given modes of preparation, reactions, and tests. In the next chapter, on the chemistry of tissues, are found rules for the analysis of the constituents of muscle, existing in its aqueous extract, the albumens, myosine, creatine, creatinine, sarcine, xanthine and inosite. In the chapter on digestion, the student is taught how to analyze saliva, and to perform experiments on the nerves of all the salivary glands; how to obtain gastric juice, test the effect of pepsin, prepare the components of bile, procure glycogen, etc. The rules for the examination of urine are an epitome of such important information as is more usually found scattered through theoretical treatises, where it is given with far less precision, because written with less view to practical application by the reader. Hoppe Seyler's Handbuch is the basis of much in the entire section, but this is no adaptation, nor even compendium, but every sentence bears the stamp of practical experience, sincerely anxious to encourage new experiments. It would be faint praise to say that a medical student who should conscientiously "go through" this manual, would know a hundred times as much physiology as it is now possible for him to attain by two years' attendance upon the best physiological lectures. Indeed we have no more sincere wish in regard to the important problem of medical education, than to see such a course of practical personal study rendered obligatory upon every one, man or woman, who is permitted to unveil the secrets of the animal frame. We have thought that even an allusion to the details considered by such competent authorities to be within reach of the "beginner," may be useful to many, who on the one hand regard practical physiology as something too formidable to be attempted, and on the other hand do not hesitate to announce and to base their practice upon physiological theories, of which a little practical knowledge would have shown the futility.

The second volume of the manual is devoted to plates of physiological apparatus, and of microscopical preparations.

GUIDE TO THE MICROSCOPIC EXAMINATION OF ANIMAL TISSUES. Von DR. SIGMUND EXNER, Privat Docenten für Physiologieu nd Assistenten am Physiologischen Institute zu Wien. Mit 3 Figuren in Holzschnitt. Leipzig: Wm. Engelmann. 1873. (8vo, 93 pp.)

THE author of this little work has a large class of students at the Physiological Laboratory in Vienna, and to avoid the trouble of repeatedly dictating to them the directions for microscopical manipulation he has had the latter printed. Although the book is well adapted to the purpose for which it was designed, we are nevertheless inclined to agree with Dr. Exner's remark in his preface, that, "even with the aid of this little book, it is very injudicious, if not impossible, for the beginner to attempt to teach himself without the help of a text-book on histology and the assistance of a teacher." The directions for the various manipulations are so short as to be in many cases almost useless for one not already accustomed to microscopic work. For example, in speaking of chromic acid for decalcifying the ossicles of the ear (p. 80), the strength of the solution and the manner of using it are not mentioned. It is recommended (p. 49) to transfer the melted paraffine to the box in which the preparation is to be embedded by means of a pipette. Why not avoid obvious and unnecessary difficulties by pouring it directly from the dish in which it is melted? Reference is made, at p. 87, to a new method of embedding without previously dehydrating the specimen: crude transparent soap is to be dissolved in ½ to ⅔ its volume of alcohol (not absolute) by the aid of heat. The mass becomes hard on cooling, and may be cut after one or two days. Sections are to be made with a dry knife, and the soap washed out of the section with water. This method was recommended by Flemming (*Max Schultze's Archiv*, Bd. ix., S. 123), who states that a transparent soap should be selected which *does not contain glycerine*. Again, in describing the process of tingeing with carmine, no mention is made of acidulated water for fixing the carmine in the preparation. The omission of many of these little practical points will cause some embarrassment for beginners, though the book is undoubtedly useful for those who have had more experience.

Though most of the methods are given at length in other works on the microscope, there are a few which we do not remember to have met with before, and it may be of interest to refer to some of them.

Absolute alcohol may be very readily and cheaply obtained from ordinary alcohol in the following manner:—Sulphate of copper is to be heated until it becomes white and the water of crystallization is driven off. It is then to be placed in a bottle of alcohol. After standing for a day or so, with occasional shaking, the alcohol has become absolute. When the salt resumes its blue color, it requires another roasting to be again fit for use. Sulphate of copper is insoluble in alcohol.

Some preparations are very difficult to embed, as, from their shape, air-bubbles become entangled in them. This may be readily obviated by placing the embedded specimen, while the medium is still fluid, in the receiver of an air-pump, and exhausting as rapidly as possible.

Salivary corpuscles are recommended as test objects for microscopes destined to anatomical use.

"A microscope which shows distinctly the molecular movements in the interior of fresh salivary corpuscles suffices for most investigations."

REVUE DES SCIENCES MÉDICALES EN FRANCE ET A L'ETRANGER. A Quarterly Analytical, Critical, and Bibliographical Summary. Edited by GEORGES HAYEM, Fellow of the Faculty of Medicine of Paris, and Physician to the Hospitals. Paris: G. Masson. 1875.

THE first two numbers of this noble work are before us, and certainly do great credit to the originators of, and the colaborators on, the work. Although the announcement is that each number will contain about 400 pages, the first one has 448, and the second 1,037. The execution is very good, the page having a clean and tidy appearance; many of the articles are quite extensive, and with each division is placed with biographical notices, under the heading *travaux à consulter*, the titles of less important articles, or of those to be noticed at greater length subsequently.

The editor calls attention to the previous lack in France of any quarterly or annual medical reviews, such as have long been possessed by Germany and England, and which are now rendered especially necessary by the increasingly rapid advance in all that pertains to medicine as a science. The subjects are arranged under the following general heads:—Anatomy, physiology, medical chemistry, therapeutics, hygiene, internal pathology and clinical medicine, obstetrics and diseases of women, diseases of infants, cutaneous diseases and syphilis, alcoholism and mental medicine, legal medicine and toxicology, external pathology and clinical surgery, operative medicine, ophthalmology and otology, and general pathology.

We cannot see that the editor is at all open to the objection of having shown a bias in favor of French literature to the exclusion of that of other countries, and if the promise made in the prospectus is carried out, viz., that "the *Revue* will take note of everything that is published in France, or abroad, in the domain of medical science," it will be a welcome addition to the libraries of many gentlemen who can read French but have not yet conquered the German.

A complete index at the end of each year is promised, in addition to the table of contents contained by each number.

The price (in gold) for subscribers in the United States is forty francs, irrespective of custom duties.

CONTRIBUTIONS TO PRACTICAL SURGERY. By GEORGE W. NORRIS, M.D., late Surgeon to the Pennsylvania Hospital; Vice-President of the College of Physicians of Philadelphia; Member of the Société Médicale d'Observation of Paris, etc.

ESSAYS from the pen of this author have always found a welcome in the profession. The subjects selected are of that important class which so frequently cause anxiety to the practitioner, which are but cursorily referred to in general works on surgery, and concerning which there has been so much diversity of opinion. To bring order out of chaos, Dr. Norris has adopted the statistical method, and by careful analysis of his tables has furnished us with results which will prove of inestimable value in practice.

The researches on which these tables are based are from foreign and home sources; they have been made with laborious care, and the analyses and deductions, those of a master in surgery, have been made in such a spirit of fairness that they cannot fail to convince; several of the essays appeared originally in the *American Journal of Medical Sciences*, and we are under additional obligations to the author for the trouble he has taken in presenting them in their present form.

The first hundred and eleven pages are devoted to the subject of non-union after fractures; after an exhaustive inquiry into causes and treatment, are the following recommendations:—

"1st. To apply the method of cure by compression and rest. If the fracture has been regularly treated, and is not consolidated at the usual period, replace the limb in the apparatus, and insure to it a state of complete immovability; if the treatment of the injury has been altogether neglected, or been inefficient, apply proper splints and moderate compression with a roller, and renew these as soon as they become in any degree lax.

"2d. If, from want of action in the seat of injury, rest and compression are in themselves inefficient to produce a cure, continue the state of immovability in which you have placed the limb, and apply blisters, moxas, iodine, or some other stimulant to the seat of fracture.

"3d. If both of these modes fail in producing deposition of callus, employ frictions.

"4th. If the methods mentioned fail to produce a change, or the patient has already been suffering from his injury for eight or ten months and there is no contra-indication to it, resort to the seton.

"5th. If the case be one to which, from its long-standing or state of the injured parts, the seton is inapplicable, expose the fracture and apply caustic potash to the fractured ends.

"6th. If all the above means have been carefully resorted to unsuccessfully, and not till then, resect the ends of the bones.

"7th. Never resort to amputation of the member until fair trials have been made of all these methods, and then only at the request of the sufferer, after he has found that the limb can be of no possible service to him.

"In employing any of the above means, the obstacle to the occurrence of union which may exist, arising from the state of the constitution, should be carefully sought for and combated by appropriate treatment."

The author gives a very complete table of one hundred and fifty cases, culled from foreign and home sources, and a summary, from which the following conclusions are drawn:—

"1st. That non-union after fracture is most common in the thigh and arm.

"2d. That the mortality after operations for its cure follows the same law as after amputations, and other great operations on the extremities, viz., that the danger increases with the size of the limb operated on, and the nearness of the operation to the trunk; the mortality after them being greater in the thigh and humerus than in the leg and forearm.

"3d. That the failures after operations for their relief are most frequent in the humerus.

"4th. That after operations for the cure of ununited fractures, failures are not more frequent in middle-aged and elderly than in younger subjects.

"5th. That the seton and its modifications is safer, speedier, and more successful than resection or caustic.

"6th. That incising the soft parts previous to passing the seton augments the danger of the method, though fewer failures occur after it.

"7th. That the cure by seton is not more certain by allowing it to remain for a very long period, while it exposes to accidents.

"8th. That it is least successful on the femur and humerus."

The Essay on Compound Fractures is replete with sound practical advice, and has appended to it a statistical account of the cases of amputations performed at the Pennsylvania Hospital from Jan. 1, 1850, to

Jan. 1, 1860, with a general summary of the mortality following this operation in that institution for thirty years.

The statistics of the mortality following the ligature of arteries are full of interesting detail, and will well repay an attentive consideration.

FRACTURES OF THE ELBOW-JOINT. An Essay to which was awarded the Second Prize of the Boylston Medical Society, for eighteen hundred and seventy-three. By WALTER ELA, second-year student Harv. Med School.

FIFTY-SEVEN pages on a subject, the importance of which the crippled limbs we occasionally meet with fully attest, will well repay perusal, if only that it brings back and more accurately defines our knowledge obtained from general and special works on surgery. The author's statistics are obtained from the fracture-books of the out-patients' department of the Massachusetts General Hospital, and relate principally to the ordinary fractures of the bones entering into the composition of the joint. They comport generally with those of other authors; but the pith of the essay is the description of a dissecting-room specimen obtained from the body of a female twenty-two years old, an epileptic, who died in the State almshouse. The injury, which involved the right elbow-joint, must have occurred some years before death, inasmuch as the deceased had free use of the limb, and was engaged as "helper" in a ward. A first impression was that it was one of those cases, so common in every museum, of chronic rheumatic arthritis; but a more careful analysis of the specimen proves it to be one of "Fracture of the coronoid process, partial fracture of the olecranon, impacted fracture of the neck of the radius, and separation of the internal condyle."

The essay is illustrated by an albertype taken from a drawing made by Dr. H. P. Quincy.

Correspondence.

NOTES ON THE MEDICAL SCHOOL OF BERLIN.

HOW TO COMMENCE.—FEES FOR LECTURES.—PROF. VIRCHOW; HIS COURSE ON POST-MORTEM EXAMINATIONS AND MICROSCOPY.—THE METHOD OF CLINICAL INSTRUCTION.—INFLUENCE OF HOLIDAYS ON STUDY.

BY ISAIAH DE ZOUCHE, M.D., Q.U.I., M.R.C.S. Eng.,

OF NEW YORK.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—Thinking that some notes on the medical school of Berlin might be of use to American students intending to spend the winter abroad, I take the liberty of addressing you on the subject. Although the announcement says that the lecture term begins the middle of October, most of the professors do not commence their courses before the first week in November, closing on the last day of February. Deducting a fortnight's recess at Christmas, it will thus be seen that the working *Semester* is only three months and a half. The *Kladderadatsch* jocosely notices the fact, and says that every year the Semesters are shorter, the vacations longer, and the graduates cleverer, and the natural deduction is, that when the Semesters are reduced to *nil* the doctors will attain their highest degree of perfection. Professor Virchow is one of the first to commence his course, and one of the last to close.

It is well for the American or English student to be in Berlin some little time before the opening. By doing so he will be able to ascertain who are the professors, their days and hours for lecturing, and the places in which the lectures are held, and also he can fix definitely what courses he will attend, and inform himself generally; otherwise there is a loss of several days in marking out the work and ascertaining where the various professors are to be found—not an easy matter for a stranger, unless he has some friend to give him information. There are so many subjects, and so many subdivisions of these subjects between the ordinary professors, extraordinary professors, and private teachers, of whom there are fifty-four in all, that the foreign student may well be puzzled to know how to spend his time to the greatest advantage.

There are, besides, many things of interest to be seen in Berlin, and they ought to be seen by the student before he settles down. Another advantage of being there early is, that one of the front places at any of the cliniques or courses which the student may wish to attend can be secured; and these places are the best, being nearest to the professor—a matter of importance to those who are listening to lectures in a foreign language for the first time. I would recommend those who know something of the language to be there a month before the lectures commence; for those who are unacquainted with it (and there are many such who go to the University of Berlin), this is still more important.

The foreign student is generally invited to matriculate at the university. This means simply the paying of about ten thalers, part on entrance, and the remainder when obtaining certificates for attendance at lectures. There is no matriculation examination, as it is presumed the student's own alma mater has seen after his general education. There are some advantages in being matriculated, as the certificates will bear the official stamp, and will probably be acknowledged by the American colleges, as they are by several of the English, but the foreign student is not *obliged* to matriculate, and can obtain private certificates from the professors whose courses he may attend.

The fee for each course or lecture is generally twelve thalers (nine dollars). The matriculated student pays all fees at the Quästur of University, having first entered the titles of the lectures in his Anmeltungs-Buch. The unmatriculated pay the fees to the several professors.

The greatest number of foreign students, who, by the way, are mostly men holding diplomas in medicine and surgery, go to attend the pathological courses of Professor Virchow. In the winter of 1871–72 there were about 30 English-speaking students at his demonstrative course of pathology and pathological anatomy, of whom about twenty were Americans, six or seven from Scotland, two from England, and one from Ireland. There were, of course, a good many English and American students attending the various other lectures.

Professor Virchow gives a demonstrative course of pathology and pathological anatomy on Mondays, Wednesdays, and Saturdays. (All his lectures are given in the Pathological Institute, which is situated in the grounds of the Charité.)

Monday mornings are devoted to autopsies. The object is to teach the proper mode of making an autopsy, how and what to observe, and to describe what one sees. In the early part of the session Prof. Virchow himself makes the post-mortem examination, but afterwards, when the students are supposed to be familiarized, theoretically at least, with the proper

mode, he allows one or two of them to make the section. Every step of the proceeding is worth watching. The subject is minutely examined externally, and described, before any incision is made, then the cavities are opened in order, and the viscera examined. The student is made to describe the exact *appearance* of every part, without any reference to its pathological state. He is taught the order in which the various incisions should be made, and even the manner of holding his knife. Nothing is slurred over hastily, so that two, two and a half, or even three, well-spent hours are consumed over a single autopsy. When the *appearances* have all been accurately noted, Professor Virchow sums up in a few words their relation to the pathological condition. He constantly impresses on his class the value of "naked-eye pathology." He says that in almost every instance the microscopical appearances of a part may be premised by a careful examination with the naked eye. This observation is important, coming as it does from so distinguished a microscopical pathologist.

On Wednesdays and Saturdays a number of specimens, selected by the assistants from the autopsies made during the week, are placed on dishes and handed round the class after the morbid changes in them have been demonstrated. The whole of the organs from each subject are shown, also sections of the muscles and bones, if they have been involved in the diseased process. Professor Virchow points out the seat of the primary disease, and the secondary changes induced by it in other parts. Three or four, or more microscopes, showing sections of the diseased tissues, are sent round on a tramway, so that all the students present have an opportunity of examining them. The number of specimens supplied is wonderful, and not to be equalled at any school of pathology I know of. This course is, perhaps, the most numerously attended of all Professor Virchow's lectures. There are perhaps between 130 and 150 in it this winter. The lecture lasts about two hours.

The zealous student may, by application to Prof. Virchow, obtain permission to be present at the autopsies of patients who have died in the Charité, and which are made daily between 11 and 2 o'clock by the assistants, Drs. Wegner and Poufick. There is much to be learned in this way. Dr. Wegner, who by the way speaks very distinctly, describes each part or organ as it is exposed, and then lays it aside, when it can be examined by those present. He has the gift of being able to convey information in a clear, succinct manner.

Dr. Poufick dissects with such rapidity that he appears to be unable to keep up with himself in describing what he is doing. I have frequently heard him describe (and quite accurately) the appearances observed in the subject which he had just dissected, while he was making another autopsy in a different room. This shows a wonderful power of observation and memory; but few of those present were equally blessed, and did not derive much advantage from the section actually being made. Dr. Wegner's system is *better*.

On Tuesdays, Thursdays, and Fridays Professor Virchow gives a course of microscopical pathology from 8 to 10 A.M. Microscopes are provided for those who have none, and the necessary chemical reagents. Many bring their own microscopes. Virchow's assistant, Dr. Poufick, gives a full explanatory lecture on the subjects for examination, illustrated by drawings in colored chalks on the black-board. Each student is supplied with a piece of pathological tissue or organ to be examined, and when he has made a section and placed it under the microscope, Dr. Poufick goes round to see that the preparation is properly shown, and also to point out its pathological peculiarities. Professor Virchow comes later, and visits each microscope, answering questions and giving instruction. A great deal of pathological ground is got over at this class during the session. Permission to work during the day in the laboratory of the Pathological Institute can probably be obtained by application to Professor Virchow, who is very approachable and urbane in manner, and always ready to assist the industrious student.

On Mondays, Tuesdays, Thursdays, Fridays, from 1 to 2, Professor Virchow holds a sytematic course of lectures on general pathology and pathological anatomy.

The clinical instruction in Berlin is conducted chiefly by lectures. Let us take Professor Frerich's clinic, for example. This is held daily from 11 to 12 o'clock, in Professor Frerich's theatre, which is situated in the Charité, on the second floor of the front or entrance building. The theatre is a long room with seats arranged across, rising gradually from the front to the back seats. The patient is carried in and placed on a bed, or it may be he is brought in in his own bed if too weak to leave it. Those students who are in the front row can see the patient distinctly; those in the back seats have something less than a bird's-eye view. Only the student in charge of the case (praktikant) receives the benefit of the really *clinical* information to be obtained from watching and examining the case from day to day. It is right to state that a notice is placed in the theatre inviting students who wish to become praktikanten, to enter their names in a book kept there for the purpose. These, however, devote their attention to the cases on which they are expected to report, not to the others which may be lectured on. A short history of the case is read by an assistant, and the patient is briefly examined by the professor and the praktikant. Then the professor delivers a lecture (which appears to be addressed to the praktikant), not immediately on the case before him, but on the *disease*, merely taking the patient for a text. The lecture is the chief attraction of the clinic. It is seemingly exhaustive of the subject; a valuable summary of all that is known as to the symptoms, pathology, and treatment of the disease in question. If the whole series of Professor Frerich's lectures were copied down and compiled in a book, they would make an excellent work on the theory and practice of medicine. During the fifty minutes which the clinic lasts, two or three patients are usually brought in and their diseases lectured on, the students being for the most part busy with their note-books.

I made inquiries as to whether the students were allowed to go round the wards and examine the patients in bed, to verify such of the symptoms or signs as might have been called attention to, but was informed that this was not allowed. Professor Frerich's clinic is very largely attended. Professor Traube invites his class to accompany him twice a week round the wards, and to visit and examine the patients under his guidance. This is an improvement on the ordinary clinical lectures, as there is something practical to be seen. On the other days, one or two patients are brought into the theatre, and the disease lectured on as in Professor Frerich's clinic. Professor Traube has an excellent manner of conveying information, but I consider the visits to the wards the most valuable part of his clinic. It struck me that the German students were too much lectured at. To an Englishman this incessant lecturing would be intolerable; he wants to see and feel and

hear symptoms and signs for himself. Now the clinics of Berlin are very little different from the systematic lectures, except that there is a bed in the room, and that no order or system is followed in their delivery. It appears to me that there is too much time devoted to theory, and too little to practice. The theoretical and scientific branches are well taught in Berlin; but for practical medicine and surgery I prefer the British, and especially the Irish schools. The evil complained of has, it is true, been felt to some degree in England, and perhaps also in America. Although it is no part of my object to make more than a passing allusion to any other than the Berlin medical school, yet the following extract from the *Lancet* of June 28th last, so well expresses my views of the defects of clinical teaching in Berlin, that I think it will not be out of place to introduce it here:—"Certain teachers entirely overlook the imperative importance of teaching only the practical parts of the profession at the bedside, leaving the perplexities of conflicting theories to be discussed in systematic lectures. By disregarding this point, it is not at all infrequent to find students mystified rather than edified by the efforts of their tutor. Practically, it is of greater value to assist a student in discovering what exists, than to tell him what does exist, and what he ought to find in such cases. What the clinical student wants in a case of phthisis, for example, is not to be told what may be found in most cases of this affection, nor to hear learned discourse on the vexed question of tuberculosis, but to be informed of the morbid conditions of the lung of the patient lying before him, the readiest method of detecting them, and the best remedial agents employed.

Professor Joseph Meyers' clinic in Ziegel Strasse, from 1 to 2, is well worth attending. A good many out-patients are seen, and the information gained is practical.

Professor von Langenbeck also holds his clinic at the Poliklinik in Ziegel Strasse, from 2 to 3. A good many cases are disposed of within the hour, and the clinic being a practical one, is very valuable. His reputation as an operating surgeon is so widely spread that it is unnecessary to allude to it further.

Professor Martin's clinic for Obstetrics and Gynæcology is held on three days in the week at the Entbindungs-Anstalt, in Dorotheen Strasse, behind the University, and on the other three days in the Charité. The diseases of women are well taught at this clinic. A lecture is first delivered, and then the patients are called up for examination and treatment.

Each student has the opportunity of becoming a praktikant by simply coming forward when his name is in its turn read out. He is invited to examine, diagnose, and prescribe for a case, and during the session his turn may come round frequently enough to give him a good practical insight into uterine diseases. The clinic lasts from about 10 to 11.30 or 12, but the work of the out-patient department (in Dorotheen Strasse) is not generally over until 2 or 3 o'clock. Dr. Löhlein, the assistant, attends to it, and any students who remain can see as much practice as they wish. Dr. Löhlein is most polite to foreigners as well as to Germans, and very considerate towards the patients. He is the right man in the right place.

It seems strange to British and American students that no care is taken at this clinic to spare the feelings of the patients before the class, by covering their faces during examination. The patient is simply told to get up on the table and lie down on her back, when the necessary examination is proceeded with. In the case of young girls, at least, some more delicate mode might be adopted. We do these things better in England and America. However, the women, as a rule, do not seem to mind the method pursued.

Privatdocent Dr. Fraenkel holds an excellent course, theoretical and practical, on laryngoscopy and rhinoscopy, which I can recommend to any student who wishes to devote attention to these subjects. He teaches them well, and is very painstaking with the practical work. Quite a number of patients were examined and treated at these classes. Dr. Fraenkel invites diligent students to be present at his operations. His apparatus for laryngoscopy and rhinoscopy is very complete, and he has himself introduced a few instruments which are well adapted to their several purposes.

A course of auscultation and percussion is held by Dr. Fraentzel, one lecture weekly, and practical instruction in the wards on three days in the week. With the exception that there is even on the practical days too great a tendency to theoretical lecturing, the course is good.

It would be impossible to refer in detail to the many excellent courses held in Berlin; it will suffice to mention the names of Reichert, DuBois-Reymond, Lucae Liebreich (Professor of Chemistry), etc.

During the two months' recess between the closing of the winter courses and the commencement of the summer lectures and clinics, the student may occupy his time to great advantage by attending some of the private courses or clinics—thus, courses on Operative Surgery by Professor Langenbeck, the surgical poliklinik in Ziegel Strasse. Dr. Wegner has a course of Histology. In fact, a student who keeps his eyes and ears open may do quite as much work during recess as in the regular session. There is nothing to be specially remarked about the summer session, except that it commences much later and is closed much earlier than the time announced in the Index Lectionum, and the various courses are interrupted by the usual number of holidays. Now, holidays are very good institutions in their way, but there may be too much of a good thing, and for the short sessions at the German universities it appears to me that such a superabundance exists, and is a serious interruption to those who go for work.

The correspondent of the *Daily News* (London), on the 3d of June last, thus refers to the holidays:—

"The great foe to existence of an active man at this city is the holidays. Not only do the Berliners have an extraordinary number of these luxuries, includin all the Church feasts, fixed and movable, several national anniversaries, the birthdays of half a dozen princes, and a few municipal commemorations—not only do they have all these, let us say legitimate occasions of rest and recreation, but they manage illegitimately to stretch each one over half a week. A festival which falls in the middle of the week must always run along so as to take in the next Sabbath; those which fall on Sunday must never cease before Wednesday. Take, for example, Christmas. Last winter Christmas fell, if I remember aright, on Wednesday, and the observation of the same extended till the following Monday. The next week the same thing was repeated for the New Year. Holy Week was of course utterly lost; but piety might have tolerated the infliction if the interdict had only been lifted after Easter, instead of remaining in force, as it did, till the next Wednesday. A fortnight ago Ascension threw a pall over the city, and now we are in the pangs of Pentecost. Do not suppose that Church anniversaries are observed here as in other countries, where the faithful go to church, and the unreclaimed pursue their usual vocations; or that they are observed with the slightest regard to their respective characters. Good

Friday is treated exactly like Easter. It is all matter of formal regulation. The holidays are ticketed and numbered like places at the theatre. Thus Sunday is first Easter holiday, Monday is second Easter holiday, Tuesday is third, etc.; and so with all the festivals. The dulness of the city during such a period cannot be described; and, to crown the dismal accumulation of sorrows, the journals suspend for half a week, and publishers, editors, and typos take early trains for the country. To-day is Tuesday, and no newspapers have appeared since Sunday morning. I wish to criticise the social peculiarities of my hosts, the Germans, with becoming diffidence; but I must say, as a man brought up in the belief that work should be the rule, and play the exception, that I am writing on our third *Feiertag* in a state of mind tending to depression."

I have only spoken of such courses and clinics as came under my immediate observation. It would be interesting and useful if other student-visitors to Berlin and the other medical schools of Germany would give information regarding the system of instruction pursued, for many American and English students go to the Continent merely from an idea that it is the right thing to do, but without knowing how to employ their time to the best advantage. Information regarding the working of the smaller universities is much needed. These are said to offer more advantages for the study of practical branches, but of this I am unable to speak from personal experience.

One word about the ventilation of some of the theatres and laboratories in Berlin, or rather the absence of ventilation. It appears to me that the more celebrated and scientific the professor, the less was the regard paid to the hygienic necessity of fresh air; and many of the wards in the hospitals caused a feeling of oppression and stiffness which alone would be sufficient to make one wish for the end of the clinic or lecture.

POISONING BY CARBOLIC ACID.

To the Editor of The Medical Record.

Sir:—I read the account of the almost instantaneous death of Dr. R. S. C. Foster (in The Medical Record for August 1st, 1873), from swallowing by mistake about half an ounce liquid carbolic acid.

Thinking your numerous readers might like to know of a similar case, I narrate the following:—J. Welch, a shoemaker, formerly a soldier in the English army, whilst in India contracted the opium habit, and has ever since 1857 been using the drug in the form of laudanum. About two years ago, falling short of his usual supply, he called on me for a small quantity whilst waiting for his week's allowance. I left for him ℥ss. in a small phial (his usual dose), and at the same time left for him about ℥ss. liquid carbolic acid in a similar phial, to be used, diluted, as a wash and disinfectant. The acid very much resembles laudanum in color. With that eager haste peculiar to opium-eaters, and without waiting to examine the contents of the two phials, he uncorked the first that came to hand, put it to his mouth, and swallowed its contents, which, unfortunately for him, proved to be carbolic acid. He at once found out his mistake and spat out some of it. On his reaching home he took some olive-oil, and, with the exception of a severe burning pain in his throat, which lasted a few days, suffered no further inconvenience.

Not being at home at the time this occurred, I was somewhat alarmed when I heard of it, knowing the poisonous effects of the acid. I was glad when I saw him soon after, to find him not seriously affected. I attribute his escape with so little injury to his opium habit, his nervous system being under control (he having taken his laudanum after finding out his mistake), and to the olive-oil, which I find in all cases relieves the burning pain and inflammation which carbolic acid excites when applied pure—accidentally or otherwise—to the skin. I think it difficult to remove the "acid," when swallowed, by the use of emetics. Our object should be to neutralize its effects on the mucous membrane and general system.

I remain, yours respectfully,

Aggeus Outerbridge, M. D.

Hamilton Parish, Bermuda, Sept., 1873.

EXTRACTION OF RENAL CALCULUS MORE THAN A CENTURY AGO.

To the Editor of The Medical Record.

Dear Sir:—In a rather scarce book called "Mems., Maxims, and Memoirs, by William Wadd, Esq., F.L.S., Surgeon Extraordinary to the King. London, 1827," I find on page 21, the following note or memorandum:

"Mr. Paul, a surgeon at Stroud, in Gloucestershire, lately extracted from the kidneys of a woman, by an incision through her back, a rough stone as large as a pigeon's egg, and made an entire cure; it is the first of the kind ever performed in this kingdom.—*Gent's Magazine*, Aug., 1733."

This struck me as so extraordinary, and, in view of some recent cases and articles in our medical journals, so interesting, that I thought perhaps you might think it worth a place in your journal. Should you desire it, I might send you some other curious reminiscences from this same book. Your truly,

J. H. Pooley, M.D.

Yonkers, September, 1873.

CHOLERA IN NASHVILLE.

A LETTER FROM DR. JOHN C. PETERS.

To the Editor of The Medical Record.

Sir.—The points made in the Record of September 15th, p. 464, are—1st. "The disease was not contagious." I have never maintained the personal contagion of cholera, but merely that it was communicable in various ways. On p. 87 of the August No. of the *Nashville Journal of Medicine and Surgery*, Dr. Bowling says: "Hackberry Spring is near Wilson's Spring Branch, between Market and Front streets. Near this spring lived Mary Payne, colored. She was *the first to die* of cholera in this epidemic. Being in good health, she *washed* all day on Wednesday, May 28th, 1873. [Hence she was probably a washerwoman.] On Thursday morning, the 29th, at 3 o'clock, she was seized with diarrhœa and vomiting, collapsed and died at 11 A.M.; sick eight hours. In the immediate neighborhood, and on the day Mary Payne died, Mrs. Patterson, colored, *who had been with Mary Payne*, was attacked with diarrhœa, which continued through the 30th and 31st, and on the 1st day of June she had vomiting and cramps, and, going into collapse, died. On this day, Jim McKisic, *who had seen Mrs. Patterson* in her sickness, and lived near her, was seized with similar symptoms, and on the next day, June 2d, died. On this day a colored man, *at the same house*, was taken at 5 A.M., and died at 9 P.M." On page 100 we read: "Hackberry Spring, where the disease began. . . . . Mrs. Murray and family, white, lived near this spring and drank its

water. After the death of Mary Payne, Mrs. Murray moved up on Market street. . . . . She and two sons, nearly grown, a few days after occupied the same grave." . . . All these seven cases seem to have been correlated.

3d. The RECORD says, "that there is not the slightest evidence that cholera was introduced through any initial case." On page 74 Dr. Bowling admits that the first 100 fatal cases were not recorded even by the undertakers; and Mary Payne certainly seems to have been the initial case of six of them.

3d. I reported that the preferred spots and places were principally confined to the *outer limits* and low portions of the city, etc. I need only state that New Bethel, Rolling Mill Hill, etc., are in the outer limits, and that Dr. Poynor, in the very next number of the *Nashville Journal*, directly contradicts Dr. Bowling's statements about Wilson's Spring Branch, Lick Branch, and others. The high places that Dr. Bowling singles out were not clean places. The negro villages at New Bethel, Rolling Mill, etc., page 135, were dense aggregations of little huts, with eight, ten, and frequently more persons crowded into one miserable little hovel. "Any cleanly or sanitary precautions about these assembled huts was never dreamed of. The excrement of every character of this mass of unfortunate creatures was deposited *in*, between, and around these squalid shanties." My report was as correct in all its main features as it was possible for it to be made from the conflicting accounts which I received.

A large number of Nashville physicians believed it to be true Asiatic cholera, and of course that it was imported in some way. Others thought it was of malarious origin, and that there had not been a case of true cholera in Nashville during the whole epidemic. Others declared it to be pernicious fever. Some assumed that small-pox, scarlet fever, measles, whooping-cough, etc., were constantly generated anew, and so was cholera, and that the one was no more contagious than the other. Others, like Dr. Bowling, inferred that trivial errors of diet, such as taking twelve peanuts, a glass of buttermilk, an egg, a little cabbage, some string-beans, etc., were the only true and efficient causes of Asiatic cholera As the first 100 fatal cases had not been recorded, even by the sextons, there was no chance for scientific inquiry. As some of the best physicians expressed their determination to give a full account of the epidemic, the matter was left to them, as an enormous amount of time would be required to unravel the tangled details.

Yours truly,

JOHN C. PETERS, M.D.

New Instruments.

A PRACTICAL SPHYGMOGRAPH.

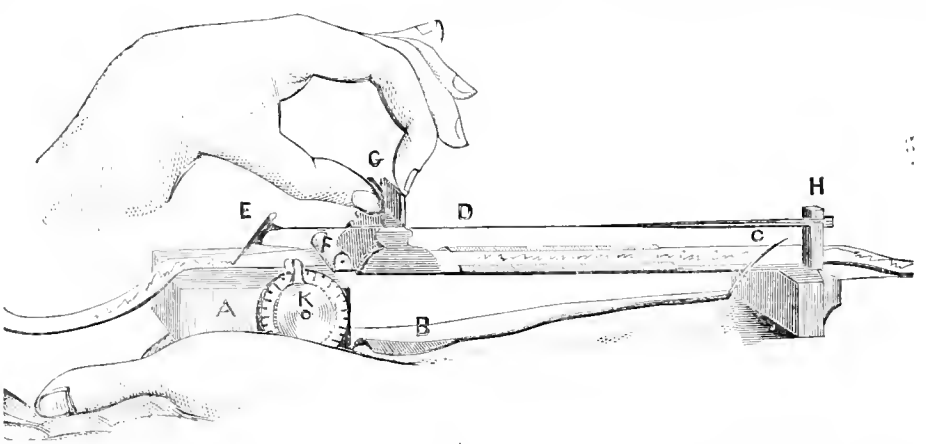
By E. HOLDEN, M.D.,

NEWARK, N. J.

SIR:—Presuming that to those medical men who have looked with sanguine expectation to the sphygmograph as a means of scientific research, and to all lovers of progress in medical science, the advent of an instrument practical as to expense, durability, and facility of application will be a satisfaction, I send you drawing and description of one which for two years has been used with gratifying success. A crude and imperfect idea of this was once presented in this journal, and since then much time and expense have developed the perfected instrument. That it has been used so long, and after several thousand tracings has required no repair, will perhaps be sufficient evidence of durability; but the profession may be interested in the conclusions grown out of so many observations, and although conscious that a greater multitude of experiments alone can determine the position of sphygmography as a distinct science, yet the following have appeared to me to be facts regarding it:

First. That it is to be relied upon in many questions of diagnosis of obscure and simulated diseases.

Second. It furnishes a means of ascertaining the condition of the arterial and venous circulation, the



ability of the heart to equalize these, and the extent of impairment in disease of the heart itself.

Third. It exhibits with accuracy the initiative action of remedies prior to any external and sensible manifestation of the same. Thus, in experimenting with quinine, a half-grain taken dry upon the tongue was found to show an effect upon the circulation as promptly, but in a different manner, as larger and repeated doses. The action of gelseminum and aconite was readily comparable by the tracings taken at intervals of three minutes. *The opening, therefore, of a new field in experimental and therapeutical medicine is at once shown.*

Fourth. The condition of the nervous system, in its relation to the economy as a vital power, is readily exhibited, and with a dictionary of tracings, such as would result from extended experiments, the instrument may prove invaluable both in prognosis in serious disorders of the brain and spinal cord, and in the diagnosis of the numerous occult affections of these structures.

Fifth. Such an instrument may prove of great value

in life insurance in ascertaining the eligibility of applicants.

Several facts of a general character have also developed during my investigations, and no one using the sphygmograph can expect to be otherwise than disappointed without fully appreciating them. Thus:

First. No tracing, however smooth and ample, is of necessity the correct record of the patient. Two tracings in the same minute, *if under different pressures, may differ widely.* Hence it is essential to take several at gradually increasing pressure, *that being accepted which is of greatest amplitude.* Others may then be continued at that degree. (The above instrument is so constructed as to allow of a pressure equal to two or more pounds, and adjustable with the greatest ease without removing.)

Second. The pressure exerted is so vital an element that tracings of patients at different degrees are rarely comparable.

Third. Tracings of radial arteries in one patient are not comparable with those of the ulnar, femoral, or carotid in others.

That the profession may have the amplest means of determining the significance of sphygmographic writings, and in the belief that with an instrument easily applied and accurately adjustable in its means of recording the compressibility of the artery (a point in which all previous inventions have been defective), —that with such an instrument a great and new field of medical science is opened, Messrs. Otto & Reynders, of New York, have undertaken to supply it at a price hardly sufficient to compensate them for their labor; the great difficulty in the way having thus far been the cost of watchwork on this side of the Atlantic, and the limited number likely to be required.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from September 19, 1873, *to October* 4, 1873.

Bailey, E. J., Surgeon.—Relieved from duty in Dept. of Arizona, to proceed to Wilmington, Del., and report by letter, on arrival, to the Surgeon-General. S. O. 187, A. G. O., September 19, 1873.

McParlin, T. A., Surgeon.—When relieved by Surgeon Irwin to report in person to the Commanding General Dept. of the Missouri, for assignment to duty. S. O. 187, C. S., A. G. O.

Magruder, D. L., Surgeon.—When relieved by Surgeon Alexander, to report in person to the Commanding Officer Dept. of Arizona, for duty as Medical Director. S. O. 187, C. S., A. G. O.

Irwin, B. J. D., Surgeon.—Relieved from duty in Dept. of the Missouri, and to report in person, for duty, to the Superintendent of the Military Academy, West Point, N. Y. S. O. 187, C. S., A. G. O.

Alexander, C. T., Surgeon.—Assigned to duty as Attending Surgeon at St. Louis, Mo. S. O. 187, C. S., A. G. O.

Weeds, Jas. F., Surgeon.—Granted leave of absence for thirty days on Surgeon's Certificate of Disability. S. O. 204, Dept. of Dakota, September 12, 1873.

Wolverton, W. D., Asst.-Surgeon.—Granted leave of absence for thirty days. S. O. 186, C. S., A. G. O.

Brown, H. E., Asst.-Surgeon.—Assigned to duty at Key West, Fla., as soon as his services at Fort Jefferson can be dispensed with. S. O. 148, Dept. of the Gulf, September 12, 1873.

Wiggin, A. W., Asst.-Surgeon.—Assigned to duty at Fort Walla Walla, and granted leave of absence for thirty days, with permission to leave limits of department, and apply for an extension of thirty days at Division Headquarters. S. O. 129, Dept. of the Columbia, September 18, 1873.

Medical Items and News.

Dr. John Byrne, of Brooklyn, has resigned his Professorship in the Long Island College Hospital, Brooklyn, N.Y.

The Newest Entozoon.—The latest contribution to our knowledge of entozoa is by no means the least curious. That a nematoid worm shall live in the blood of a man—shall multiply there, or, at any rate, somewhere in the system—shall be in such numbers that there must be many thousands at once in the body, is wonderful; but passing wonder is the fact that these thousands of active, living, feeding worms seem to do little injury. Their discoverer, Dr. Timothy Lewis, of the Army Medical Service, has given evidence which proves that some of the persons infested with them must have had these worms for years, and yet not only live, but pursue their avocations, and are in the possession of fairly good health. How is it these thousands of worms do not cause blockage and obstruction? Why do they not take the nutrition the body ought to have? What becomes of them when they die and decay, for they must do so? Where do they decay? and in what way is the structure of the blood-vessels and other parts through which they pass influenced by their passage? What a number of singular points arise, for which further investigation must find an answer! The discovery shows us, at any rate, that the entozoic diseases are not yet exhausted, and that many things must still lie over for those who have eyes to see and energy to use their eyes.—*Parkes.* —*Brit. Med. Journ.*, Aug 9, 1873.

April-fooled.—Under this title Dr. L. B. Brown, of Sheldon, Ill., narrates his experience in the *Chicago Med. Jour.* of September, of a case of labor to which he was called on the 1st of April last. Eight hours before his arrival the woman had been safely delivered of a child by an intelligent midwife. Examination showed nothing but an enormously distended abdomen, which was free from pain or sensitiveness, and the umbilical cord lying in the vagina. A very slight tension ruptured the cord, and ergot was given to cause expulsion of the placenta. No placenta followed, but the patient became sick and faint, and stimulants had to be given. Introducing a hand into the os, Dr. Brown found the back of another child presenting. By means of the hooked finger in the child's groin, and compression from without by means of a towel, the second child was readily delivered.

The size of the abdomen remaining about the same, the doctor again introduced his hand and found a sac of waters, which, being ruptured, liberated about two quarts, of fluid, and led to the presentation of the head of a third child, which was likewise delivered by the aid of the hand and the towel binder, the woman having thus far had no uterine pains. The doctor goes on to say: "I now proceeded to prospect for the placenta by introducing my hand (which was a very easy matter), and, to my utter astonishment and consternation, the head of another child, if possible, presented." In short, four children in all were born, all being female, perfectly formed, two weighing four, and two five pounds each. On July 17th all the children were

living and well, and weighed respectively eleven, ten, ten, and nine pounds.

The delivery of the placenta gave no trouble, uterine contractions being more marked than during the birth of the children.

Connecticut General Hospital for the Insane.—The Seventh Annual Report of this Institution, for 1873, gives the following exhibit: Three hundred and thirty-six patients were treated during the year; 262 were in the hospital at the beginning of the year; 74 were admitted in 1872; discharged, recovered, 11; improved, 13; stationary, 20; died, 21; remaining, March 31, 1873, 271. The occupations of the majority of the patients were as follows: Farmers, laborers, housewives, and factory employés. The medical officers are as follows: *Superintendent and Physician*, Abraham Marvin Shew, M.D.; *Assistant Physician*, Winthrop B. Hallock, M.D.; *Pathologist*, E. C. Seguin, M.D.

Madison Hospital for the Insane.—Dr. Mark Ranney, late Superintendent of the Hospital for the Insane at Mount Pleasant, Iowa, has been appointed Superintendent of the Hospital for the Insane at Madison, Wisconsin, in place of Dr. A. S. McDill, resigned.

State Lunatic Asylum, Utica, N. Y.—Dr. Theodore Deecke, of New York, has been appointed Special Pathologist in this asylum, in place of Dr. Edward R. Hun, resigned.

Bowdoin College.—Charles A. White, State Geologist of Iowa, has been elected the Josiah Little Professor of Natural History, to fill the vacancy caused by the resignation of Professor Goodall.

Hartford Insane Retreat.—The Forty-ninth Annual Report of this institution, for 1873, comprising the Forty-seventh and Forty-eighth Annual Exhibit, is neatly gotten up in cloth, covering 70 pages of interesting and valuable statistical information. Since the publication of the Report of 1868, radical reconstruction has taken place in the buildings. The first patient was received into the Retreat, April 1, 1824. There were at that time four other lunatic hospitals in the United States, all containing less than 200 patients. The number of patients in the Retreat, March 31, 1870, 134; admitted during the three years, 372. Of this number there have been discharged recovered, 147; much improved, 47; improved, 66; not improved, 43; died, 55. Total discharged, 358. Remaining at the Retreat, April 1, 1873, 148. Whole number admitted up to April 1, 1873, 5,522. Whole number discharged during the same period, 5,374. Whole number remaining, 148. Average number for the three years, 147.

An account of the proceedings of the Semi-Centennial Anniversary of the founding of the Retreat, held January 7, 1873, is contained in the Report.

Medical officers: James H. Denny, M.D., *Physician and Superintendent;* James H. Whittemore, M.D., *Assistant Physician;* Walter J. Norfolk, M.D., *Junior Assistant Physician.*

The Tariff of Drugs in Germany is compulsory, and every apotheker must strictly adhere to it. Each article has its fixed price for the current year, and this price once affirmed in the tariff must be retained to the end of that year, never mind how high or low the market prices may rise or fall. This sometimes happens awkwardly. The price of herbs, for instance, is just now double that of last year, because those who used to gather them can obtain better remuneration for their labor in other ways. During the last six months iodide of potassium was, as is well known, subject to considerable variations in price. The purchase price per pound, in November, was 60 schillings. Later it could be had at the rate of 20, and now for 30 schillings. Yet since the first of November the price for 10 grammes has been 1½ schilling, and that price will be maintained until the 1st of January, 1874, no matter what its market value may be. It so happened at the commencement of the current year that speculators laid hold of iodide of potassium, and at the same time a new method in the manufacture of aniline was introduced, which required larger quantities of iodine, and thus enhanced its price considerably. However, this new process does not seem to have proved successful, and prices have consequently receded.

The Prussian tariff not only defines the price of every article that is to be had in the apotheken, but it also states the rate to be charged for any vessel used in the dispensary, while each flask or bottle, and even each box, has a price according to size. Not less minutely are the prices regulated at which certain manipulations are to be charged, and with a painful and paltry closeness provision is made in cases where two operations, which might be sometimes charged separately, can be performed at one time for the same mixture, and are to be charged only as one. Thus under the heading Solution, we read:—

For the dissolving of one or more extracts (with the exception of fluid extracts) of sugar or gum arabic in any liquid, filtration not being necessary; for triturating electuaries and pulps, as also for triturating powders with any liquid, if the powder does not or only partially dissolves in such liquid, 1 groschen.

Note 1. If in any mixture an extract is to be dissolved, and there is also a trituration, no charge is to be made for the latter operation.

Note 2. If in one mixture a solution of salts in aqua communis is to be made, and also a solution of any extract, both operations may be charged; but no charge is to be made as for aqua communis filtrata.

For dissolving of one or more salts of sugar or manna in water or other liquid, including straining or filtering of the solution, 1½ groschen.

Note 1. If the salts are enumerated as in a crystallized and pulverized state in the tariff, the solution can only be charged according to the price of the crystallized salt.

Note 2. For a solution of salts that are to be used for making pills, ointments, and so on, no charge is to be made.

Note 3. If salts, sugar, and manna, or only two of those ingredients form one solution, the price of one operation only can be charged.

For the dissolving of phosphorus in sebacic or ethereal oils, in ether or alcohol, 1 groschen. Furthermore, the prices for decoctions, for preparing of plasters, pills, ointments, powders, etc., are determined with the utmost precision, of which a few instances are added.

The preparing of an emulsion is to cost 2 groschen; a plaster from 1½ to 6 groschen, according to size; pounding and forming thirty pills, 2 groschen; an ointment which requires no melting, 1 to 5 groschen; ditto with melting, 2½ to 8 groschen.

Each separate operation of weighing or counting out drops is priced 3 pfennige.

[We may mention that the Prussian currency is as follows:—12 pfennige = 1 silbergroschen, 30 silbergroschen = 1 thaler. A thaler (or reichsthaler, which is its full name) is worth 3s. of our money. Therefore a silbergroschen is worth not quite 1½d. of English money.—Ed. *Chemists & Druggist's Circular.*]

Medical Department of Life Insurance.

THE LAWS OF TRANSMISSION OF RESEMBLANCE FROM PARENTS TO THEIR CHILDREN.

By JOHN STOCKTON-HOUGH, M.D.,
OF PHILADELPHIA.

PART III.

MALES RESEMBLE THEIR MOTHER, AND FEMALES THEIR FATHER.

ARISTOTLE seems to have been the first to make mention of this fact, though such an observation may have been made long before his time, as many of the ancient philosophers were mere recorders of verbal traditions handed down through preceding ages. Most of the ancient authors treat of the subject of resemblance of children to their parents; many of them entered into a detail and degree of differentiation which leaves little scope, even to the imagination, to exceed them. Ludovicus Bonaciolus* considers the subject under eight different heads, four for the female and four for the male. Venette† proposes five different inquiries concerning resemblance. Mercatus, Montanus, Ambrose Paré, Mercurialis,‡ Osiander,§ and numerous others, have entered very fully into the subject, but none of them appear to have settled upon any definite prevailing law controlling such resemblance.

Niceus, whom Bonaciolus‖ calls "the noble poet," seems to have been among the earliest authors who make a distinction of sex in the resemblance of children to their parents. He says: *Mas avo materno similis.*

Aristotle¶ has it: "For the most part girls resemble their mother, and boys their father; though the contrary is often the case, and the females resemble their father, and the males their mother, and the different parts of the body resemble either parents."

Pliny** says: "In some cases the female children resemble the father and the males the mother."

According to Buffon, in general the males resemble their mother and the females their father.

Lucretius†† has the same:

> Thus oft the father's likeness does prevail
> In females, and the mother's in the male.

"We know, moreover," says Velpeau,‡‡ "since Aristotle, that the boys, as a general rule, resemble their mother, while the girls rather incline to the features of the father, etc., but there is such variation in this respect, that it is impossible to come to anything definite in regard to the mechanism of generation."

Many other authors might be cited fully confirming the same view, but they are principally statements handed down from one author to another.

Pre-eminent among those who have maintained this law, is M. Ch. Girou de Buzareignues,§§ who has done more to prove the truth of his position than any other person. His entire life was spent in experimenting on the generation of animals and plants, and his deductions are drawn from the observations and experiments of his friends as well as his own. He was probably the first to contend that this differentiation in resemblance was a law, and his deductions and observations from repeated experiments conducted during a series of years fully confirm his position. None of these authors have given a very definite explanation of the reason or cause of this law; most of them attribute it to atavism, others leave it unexplained. Further on, the author will enter into the cause of this phenomenon.

Mr. Sedgwick* calls attention to the frequency with which consumption has been observed to be restricted in its appearance to one sex. He cites a case occurring in his own practice, in which "it is to be noticed that the disease was transmitted by atavic descent from the paternal grandmother to three granddaughters, and that although there were five grandsons in the family, none of them inherited the disease." He relates another case in which the disease was limited, with one exception, to the males for three generations, being transmitted by atavic descent.

Dr. Greenhow† relates the case of an old couple who both survived their eightieth year, who lost all their sons by phthisis, while all their daughters escaped. In a second case, in which both parents survived to an advanced age, the five daughters all died of phthisis, while the sons were exempt. In a third case, six out seven daughters died of phthisis under thirty years of age, the seventh went to India, where she also died at about the same age; but the only two sons are alive and well. "In none of these cases was either parent phthisical; but it is worthy of note that all three mothers were asthmatical, the fathers being in each case healthy."

The writer knows of a case in which a daughter inherited phthisis from her father, her two brothers being free from it. In another case a son inherited phthisis from his mother, while a daughter and five other sons were free from it.

One drunkard begets another (ebrii gignunt ebrios), says Plutarch, also Aristotle, Gellius, Macrobius, and numerous others. Atavic descent is very frequently noticeable in this connection, for we often see the daughters of drunkards have drunken sons, though they may be perfectly temperate themselves. The moral of this in a matrimonial point of view is evident.

The writer's father has a mare that had in her tenth pregnancy a horse-colt resembling the mother in color, though taller; and in her eleventh pregnancy, a mare-colt (by same father), resembling the stallion in color and size.

Sedgwick, in his elaborate articles,‡ mentions the case of a man who had ichthyosis from the time he was eight years of age. "This man had three sons and three daughters. One son died at the age of five years, and another at the age of seven, both of whom were free from the disease. The other son is living and past middle age, but has shown no tendency to the disease. The three daughters have all lived to grow up and marry, and in them likewise the skin is unaffected. Two only of the three daughters have had children. The eldest daughter has had four, of whom the first-born, a girl, has had no appearance of the disease; the three other children are boys, of whom the eldest, aged fourteen years, and the youngest, aged nine years, suffer from the disease, whilst the other son, aged eleven years, is free from it. The family of the other

* Enneas Muliebris, cap. ix., Apud Spachius, Harmon. Gynæciorum, pp. 145–6.
† Génération de l'Homme, etc., p. 198, part ii.
‡ All in Spachius.
§ Handbuch d. Entbindg., etc. t. i., p. 634.
‖ Loc. cit.
¶ Hist. Anim., B. vii., c. vi. 5.
** Hist. Nat., B. vii., c. x. (10).
†† De Rerum Natura, B. iv., ver. 1215 et seq. Good's translation.
‡‡ Midwifery. Philadelphia, 1852, p. 153.
§§ De la Génération, etc. Paris, 8vo, 1828, and several papers in Annales des Sciences Naturelles, 1825 to 1833.

* Op. cit. July, 1863, p. 160.
† Medico-Chir. Revw., March 25, 1862; out of Sedgwick.
‡ William Sedgwick, British and Foreign Med.-Chirur. Review, vol. xxvii., Apr., 1861, pp. 447-89. "On Sexual Limitation in Hereditary Diseases." Art. ii.

daughter consists of three children, the eldest of whom, aged six years, is, as in the former case, a girl, and free from the disease, whilst the two other children, who are boys, aged respectively three years and one year, have the skin very decidedly affected. It is to be noted that the disease in these grandchildren has in each case appeared within a few months after birth. There are two other important facts to which I would call attention before passing on; one is the non-development of the disease in the second generation, and its reappearance in the third, which is an instance of *atavism* for which no satisfactory reason can [?] be assigned; the other is the sexual limitation of the disease, which in this case is complete in a double sense; for whilst the females in the family have alone transmitted the disease, its appearance has been restricted to the males." Dr. Elliotson * reports a case of the same disease, coming under his observation, by which two brothers were affected, and one brother and sister were free from it.

In the well-known Lambert or porcupine family,† this same disease was transmitted to four successive generations, and always limited to the male sex. Two brothers, descended from the original porcupine man, had seven sisters, who were all free from the disease.

Mr. Sedgwick calls attention to the fact of the limitation of the disease in the above cases to the males alone, and says, "it is not to be supposed that there is any peculiar inaptitude in the fair sex to this unsightly affection of the skin, for at one of the meetings of the Med.-Chir. Soc. in 1818, the case of Mrs. Holden ‡ was brought forward, in which the disease was limited to the female sex, in the person of her daughter, aged three years, in whom the disease had appeared when about three months old, the same age as that at which it had occurred in her mother; and this case is the more remarkable from the fact that whilst the child inherited the disease of her mother, she inherited the features of her father."

The same gentleman cites from various authorities several cases of individuals having the rose-colored eyes of albinoes, as having "been observed to be often hereditarily connected with one sex." M. de Saussure § mentions two well-known albinoes who were brothers, whose sisters did not possess this abnormality. Dr. Trail ‖ reports the case of three albino brothers, who had two sisters (the first and fifth children) who were not albinoes, and two twin brothers, one of whom was an albino. Thomas Jefferson ¶ mentions the case of two albino sisters, who gave birth, the one to an infant who was an albino like herself, the other to a very black infant like the father. Sedgwick cites the following two cases from Cornaz.** The two grandsons of a family residing at the village of Ferlens, near Oppens (Switzerland), married, and had each of them two daughters, one affected with albinism, and one exempt. These two albinoes, who are the great-granddaughters of the family referred to, and from whom the inheritance is derived, married: the one had no children; the other became the wife of an agriculturist with black hair and brown eyes, is mother of an infant who is an imperfect albino.

The other case is that of a Swiss girl whose parentage unites her with seven other albinoes. Her great-grandfather had two children, a son and a daughter. This girl, first mentioned, is the only one of the descendants of the son affected with albinism. Among the descendants of the second child (daughter), there have been seven albinoes. This daughter, last named, had two sons who married two sisters. The eldest had, among other children, three albinoes—namely, one son and two daughters. The other brother had seven sons, none of whom were albinoes. Five of these seven sons married, but only one of these five had albino children, and he had four albino daughters out of a family of three sons and nine daughters. Mr. Sedgwick suggests in explanation of the fact of the appearance of albinism in the fourth generation in the one case, and in the fifth generation in the other, that, in the latter, albinism did not appear till the fifth generation, owing, it would seem, to the fact that Charles Rey had seven sons, but no daughters; the defect being transmitted to daughters only. In these cases we see fathers transmitting their abnormalities to their daughters in six instances out of seven.

"Mr. Wardrop has recorded a case in which five brothers, afflicted with the hemorrhagic diathesis, had three sisters free from it; but each of the sisters had, besides other children, two sons similarly affected, whilst no female in the family shared in the disease." (Sedgwick.)

Mr. Sedgwick mentions a case of hereditary pityriasis versicolor which was limited to the males for several generations, "whilst the females of the family, although not suffering from it themselves, have transmitted it to their male children." *

Dr. Henry Stewart records the two following cases of sebaceous tumors of the scalp, which were hereditarily limited to the female sex, in one case for ten, and in the second case for five generations. He observes that "some of the females derived the inheritance from their paternal grandmother by atavic descent, which affords additional proof of the influence of sex, for except when a male thus intervened to arrest the appearance of the disease, the inheritance was direct from parent to child." †

Alibert ‡ states that plica polonica, a disease of the hair in Poland, "is observed not unfrequently to attack the father and the grandson, whilst the son is spared, a character which is common to it with other maladies, particularly with gout."

"Giron relates the case of a man, descended from a family in which the special use of the left hand was hereditary; although not himself left-handed, he has a daughter who is so, and all of whose children are left-handed; he has, moreover, a son married, who is not left-handed, but who is the father of a daughter so completely left-handed from her cradle, that it has been necessary to tie up the left hand, so as to force her to serve herself with the right hand." §

Sedgwick saw a case of supernumerary finger on the left hand of a girl whose two brothers were not so deformed, but whose father, paternal grandmother, and paternal aunt, all had precisely the same defect.

Giron ‖ relates a case in which a *rarer* form of atavism is exhibited, of a defect transmitted through a *male to a female*. "A woman who was club-footed, had three male children all well formed; the eldest of these married, and had, at first, six sons well formed, and afterwards four daughters, one of whom was club-footed like her paternal grandmother." ¶

* London Med. Gazette, vol. vii., p. 623. 1831.
† Philosophical Transactions, 1751, p. 299; and 1755, p. 21.
‡ Transactions, vol. ix., pp. 52–3.
§ Voyage dans les Alpes.
‖ Nicholson's Journal, vol. xix., p. 1806.
¶ Notes on the State of Virginia.
** Annales d'Oculistiques, 1850.

* Op. cit., Apr., 1863, p. 449.
† Sedgwick, op. cit., p. 451.
‡ Description des malad. de la Peau, p. 40, Paris, 1814.
§ Sedgwick, op. cit., p. 459, out of Giron, De la Génération, 1828, p. 278–9.
‖ Op. cit., p. 279.
¶ Dr. Albert H. Buck, of New York, in a recent letter, relates the case of a girl, six months of age, whose little fingers have a peculiar

Maisonneuve * relates a case of epilepsy in a man inherited from his mother's father. Insanity and other peculiarities in the case of George III. were transmitted to the males through the females by atavic descent for eight generations. †

Esquirol ‡ states that insanity is more often transmitted by the mothers than by the fathers." M. Baillarger § is of the same opinion, and declares that "it is more to be feared when it is on the mother's than on the father's side, not only because it is more often hereditary, but also because it is transmitted to a greater number of children." He gives the following statistics with regard to sex:

"Of 346 children who had inherited the disease from the mother, I have found—197 girls and 149 boys. The difference is 48 or a fourth.

"Of 215 children to whom the disease had been transmitted by the father, I have found—128 boys and 87 girls. The difference is 41 or a third.

"The madness of the mother is transmitted, then, more often to the daughters than to the sons, in the proportion of a fourth: the madness of the father, on the contrary, more often to the sons than to the daughters, in the proportion of a third."

"The transmission of the mother's insanity is scarcely more to be feared, as regards the boys, than that of the father; the mother's insanity, on the contrary, is twice as dangerous to the daughters."

Dr. James Webster ‖ says of the hereditary predisposition to mental disease, as it appeared in the 1,798 insane persons comprised in his observations—31.19 per cent. of the males were hereditarily predisposed, whereas of the 1,094 females, 37.47 per cent. were of that description. "This feature becomes more interesting," he observes, "when it is remembered that insanity is a disease more frequently transmitted to offspring by the mother than by the father; whilst mothers also transmit this disease oftener to their female than to their male children."

Sexual preference is not without its influence here, as I have shown in my previous article ¶ that insanity is much more frequently met with in females than in males.

Dr. Morean ** has carried the investigation of this matter still further, and in a direction calculated to assist our inquiries. He was of the opinion "that personal resemblance and cerebral disorder may be transmitted by either parent, but never by the same; that where children resemble the parent of the opposite sex, the following results were obtained: of 22 females suffering from insanity, 17 had inherited it from the mother and five from the father; while of 142 insane males, 95 had inherited it from the father and 47 from the mother; when, on the contrary, the analogy of resemblance was inverted, 47 sons who resembled their father derived their insanity from their mother, and 8 girls, who resembled their mother, derived theirs from the father." Sedgwick, from whom we quote the above, ascribes the peculiarity to atavic descent. He observes that "in the most strongly-marked forms of hereditary disease, uninterrupted descent for several successive generations is the exception rather than the rule."

"In phthisis, for example, the late Dr. Theophilus Thompson,* in a paper read before the Medical Society of London, remarked, 'it is worthy of observation, that the influence (of phthisis) tends peculiarly to extend in the direction of the sex in which it first appeared.' And in 'the first annual report of the Hospital for Consumption and Diseases of the Chest,' it is stated, that of 669 male and 341 female patients suffering from phthisis, and which was ascertained to be hereditary in 18.2 per cent. of the former, and in 36.3 per cent. of the latter (showing that females are twice as liable as males are to inherit the disease from their parents), it is found that whilst the father transmits the disease to his sons in 59.4 per cent., and to his daughters in only 43.5 per cent., the mother transmits it to her sons in 40.6 per cent., but to her daughters in 56.5 per cent." †

Cancer seems to be hereditary in many instances, and, as I have already shown ‡ it to be nearly two and a half times as fatal among females as among males, it is probably due to arrested or defective development, as women have relatively a larger proportion of glandular structure, and are withal less highly developed in their organization than males. The developmental theory of cancer, once established, will corroborate the view here taken of the relative evolutionary developmental condition of the sexes.

In a case of hereditary deformity, consisting of crooked fingers and enlarged joints transmitted five generations, "it was observed by the family that those children who inherited the deformity from the father had it in the more marked degree; those who inherited it from the mother had it in a less marked degree." And what is most curious, two first cousins of the fourth and fifth generations married, one having the deformity in a marked degree, and the other in a less marked degree, yet their two children had perfect hands. §

From this it would appear that "family proclivities to disease are more strikingly manifested in brothers and sisters than between parents and children. The intermingling of opposite tendencies begets, so to speak, in the children a neutralization of the peculiar aptitudes to disease existing in the parents respectively."

"Physiological likeness of the parents induces imperfect progeny, *pro tanto*, just as certainly as intermarriage within forbidden degrees of consanguinity."

In certain animals the young resemble most the parent of the same sex; the young male resembles more the father, and the young female the mother. This phenomenon takes place in the majority of birds, and, following Hausmann, in the equine species. Girou pretends that it is above all true in our domestic animals, in that which concerns the height, the length of hair, the amplitude of the pelvis, in a word, the circumstances of the plastic life, and that this analogy becomes more pronounced by the progress of age than it was in the commencement. The black bulls often produce with red cows heifer-calves which are red at the epoch of their birth, but become black with time; in the inverse circumstance, the young males are from the first black, and red in the adult state. ¶

crook in them, while exactly the same defect is noticeable in the little fingers of her father's mother. The parents of the child, however, are free from any such deformity.

* Recherches et obs. sur l'Epilepsie, p. 68.

† Sedgwick, op. cit., 467.

‡ Des Malad. Mentales, p. 65, 1838.

§ Archiv. Gén. de Méd. Paris, 1844. 4 série, t. v., pp. 116–117.

‖ Medico-Chir. Trans., vol. xxxii., 1849, p. 118.

¶ New York MEDICAL RECORD, June 16 and July 16, 1873, pp. 297–302, 353–4–5. "The Relative Viability of the Sexes."

** "On the Signs indicative of Hereditary Predisposition to Insanity." L'Union Médicale, No. 48.

* Hints on Some Relations of Morals and Medicine, with special reference to pulmonary consumption: Lond. Journal of Medicine, p. 402, 1851.

† Sedgwick, op. cit., p. 208.

‡ "Deaths from cancer, occurring in Philadelphia from Jan., 1861, to Dec. 30, 1870, showing the relative proportion of males and females dying from this disease, and the percentage of women dying of cancer of the uterus." Jour. of Gynæcological Society of Boston, Sept., 1872, p. 201–4.

§ Horace Dobell, M.D. Med. Chir.-Trans., vol. xxviii., p. 25. 1863. J. Adams Allen, M.D., LL.D., Medical Examinations for Life Insurance, Chicago, 1867, p. 47.

¶ De la Generation, p. 124.

"It appears to be more common, however, that the parents act upon the sex of the product of generation which is opposed to their own.* One of the Colburns † brought into the world three boys and two girls, and propagated her infirmity (supernumerary fingers and toes) to all the boys, but to only one of the girls; the second son of Gratio Kallja ‡ had one son only who was not deformed, but his three daughters all had supernumerary fingers and toes like himself; the daughter only propagated the anomaly to one of her sons, and not at all to her daughters. A man who had the palate malformed, engendered four sons well formed, and three daughters affected with hare-lip and fissure of the soft palate; in like manner the sister of his mother had five daughters well formed, and five sons with hare-lips. § A woman related to a family in which there were several hypospadiacs, brought into the world two sons affected with that deformity. Another woman of weak mind, and of a family several members of which were hard of hearing and idiotic, gave birth to two boys, deaf-mutes, of which one was besides an imbecile; to two daughters well constituted; and finally to a boy who equally enjoyed good health." ‖

A negro in Berlin produced with a white woman seven mulatto daughters and four white sons.¶ Analogous observations have been made on bastard animals. Among the colts of the mare which had previously been fecundated by a Quagga, the females resembled more than the males their mother for the color of their hair. Bastard pups of a dog and female wolf exhibit the same difference of resemblance as regards sex, as the two males resembled the wolf (female) in form, movements, the aversion for men, the defiance of and aversion for dogs; while the female had the head of a dog, did not trot as a wolf, was pleased with dogs, and exhibited less aversion for men.**

Girou assures us that the same phenomena take place in ordinary generation in relation to conformation of the head and other members, to the color and the constitution, as a consequence, in general, to the sensibility and irritability; he makes the remark that mules (females) have a longer mane, the pelvis larger, that they are more headstrong and vicious, that they have more resemblance, as a consequence, to their father than the male mule, and that the latter have much more frequently the same colored hair as their mother.†† He adds that the male dog resembles more his mother, and the female her father; that a smooth mare gave birth to three females provided with hair, and one male smooth like herself; that a cow having white hair with patches of red produced four males that resembled her in color and distribution of spots, and a female similar to the bull; and finally, that the same thing happened in the ewe and in cats. ‡‡

1st Generation.

Gt. Grandfather	Gt. Grandmother	Gt. Grandfather	Gt. Grandmother
2d Generation.			
Grandmother	Grandfather	Grandmother	Grandfather
3d Generation.			
Father	Mother	Father	Mother
4th Generation.			
Daughter	Son	Daughter	Son.

The same writer says,§§ that when in that relation at birth the young resemble their ancestors of the same sex; that, as a consequence, a young male will resemble his mother and his maternal grandfather, as indicated in the foregoing table.

This table is founded on the same law as that of males resembling their mothers, and females their fathers, but extended one generation further. It reads, therefore: 1. the daughter resembles the father; 2, she resembles her father's mother; 3. she resembles her father's mother's father, etc.; or, more properly, her ancestral resemblance has descended in this line more than from a corresponding line in her mother's ancestry.

Osiander had already remarked something analogous.* So therefore, in general, it is that which differs, notwithstanding the affinity, which exercises a stronger influence, and we find in this traces of the law, difference in identity: the daughter resembles her father, because it is to him that she approaches the most in her origin, but she is remote from him by her sexuality; the son resembles his grandfather (maternal) because he approaches to him by his sexuality, and is more remote from him in his origin. If the manner in which we have before explained the discovery made by Chamisso is exact, this relationship is removed beyond possibility in the *Biphores*, in which the mode of generation varies following the generations, and in which the young are never procreated as their parents, but as their grandparents. †

M. Girou de Buzareignues ‡ cites the case of a girl who inherited from her father the habit of sleeping on her back, with her right leg crossed over her left.

Darwin § mentions the case of a *boy* who had the habit of rapidly moving his fingers parallel to each other and raising both hands to a level with the eyes, when excited by any pleasurable emotion. This habit continued with him even when an old man. "He had eight children. Of these, a *girl*, when pleased, (at the age of four and a half years), moved her fingers in exactly the same way," and when much excited raised her hands, all in exact imitation of the habit in her father.

Prof. Bock ‖ reports the case of a father transmitting a congenital absence of the iris to three sons, in a family of eight children; one of the sons transmitted the defect to his two daughters.

Mr. Streatfield ¶ has published the case of a family of ten children, in which the five boys squint, while the five girls do not. Neither the father nor the mother squint, but the mother has a *sister*, whose two children also squint, showing the inheritance from the mother's side. In these cases where but one eye was affected, it was always the left.

Concerning color-blindness, Mr. Sedgwick mentions the case of a boy, aged eleven years, who suffered from this defect, while his four sisters were free from it. The peculiarity of sight was derived from the maternal grandfather, who had a brother similarly affected, while another brother and three sisters were free from it. The second generation consisted of only two daughters, the mother and the aunt of the boy referred to, both of whom were free from this defect of vision. "The essential facts in this case closely correspond with those related in the case of ichthyosis, the hereditary disease being in each case limited to the males of the first and third generations, and transmit-

* *Haller*, loc. cit., t. viii. p. 99. Hoffacker, loc. cit., p. 98.
† *Carlisle*, Phibs. Trans., 1814, p. 91.
‡ *Gleichen*, Abhandlung ueber die Saamenthierchen, p. 52.
§ Nov. Act. Nat. Cur., t. 1, p. 445.
‖ *Meckel*, Handb. d. Patholog. Anat., t. 1, p. 20.
¶ *Meckel*, Archiv f. Anat. 1828, p. 186.
** *Musch*, in Der Naturforscher, t. xv., p. 25.
†† De la Génération, p. 119.
‡‡ Ibid., p. 120, 121.
§§ Ibid., p. 123.

* Loc. cit., t. i., p. 634.
† Burdach's Physiologie, t. ii., p. 269–70.
‡ De la Génération, p. 382.
§ Animals and Plants under Domestication, vol. ii., p. 7.
‖ Annales d'Oculistiques, tom. xxxiii., p. 93–4, 1855, out of Sedgwick, op. cit., p. 483.
¶ Ophthalm. Hosp. Repts., p. 153–4, 1858, out of Sedgwick, o. c.

ted by the females of the second generation, who were themselves unaffected by it." *

Dr. Pliny Earle † states that he inherited this defect of vision from his maternal grandfather, two of whose brothers were similarly affected. The defect prevailed in eight of the families related to this gentleman, being limited to the male sex in all except one family. The total number of persons in the eight families affected was 61 (32 males and 29 females); of the former nine-sixteenths were affected, and of the latter only one-fifteenth. An analysis of upwards of two hundred cases of color-blindness shows that the proportion of males affected is nine-tenths of the whole. ‡

Mr. Miln ‖ inherited his color-blindness from his maternal grandfather, who had two brothers and a second cousin similarly affected. §

Dr. Bronner ‖ records the case of a German having this defect, who had two daughters not so affected. The eldest daughter had three sons, of whom only the second was color-blind; the youngest daughter had three sons, all of whom were color-blind.

M. Cornaz ¶ cites the case of a woman who had two sons, among other children of both sexes, by two different husbands, both of whom were color-blind.

Dr. Osborne ** reports the case of a family of fifteen brothers and five sisters who had eyes resembling in miniature the markings of the back of a tortoise-shell cat. The inheritance was derived from the mother, who, with three sisters and a brother, inherited it from their mother. This peculiarity was transmitted to three successive generations by the females exclusively, though their children, both male and female, inherited the defect.

Mr. Streatfield,†† in his account of the congenital defect known as cleft iris (coloboma iridis), cites the case of three brothers having this deformity, whose mother's father is said to have had the same defect, and, indeed, it had exhibited itself in four successive generations, being limited to the males, though transmitted by the females. Sedgwick, in reviewing the case, says, the chief points of interest are—1st. The transmission of the defect without its being shared in by the mother. 2dly. That whilst two of her three sons had the defect, her three daughters were free from it; and lastly. That the maternal grandfather, the maternal granduncle, the maternal uncle, and the son of the last named, all shared the defect, which shows that the inheritance in this case extended to at least four generations.

Inherited peculiarities show themselves earlier in life in a daughter than in a son, and earlier in the daughter than in her father. The hairy family described by Mr. Crawford,‡‡ produced children during three generations with hairy ears. The hair began to grow on the father at six years of age, and on his daughter at one year.

The famous men of history owe their excellence to their mothers, and the women who have attained celebrity reflect the genius of their fathers. St. Paul wrote to Timothy, saying: "When I call to remembrance the unfeigned faith that is in thee, which dwelt first in thy grandmother Lois, and in thy mother Eunice; and I am persuaded that in thee also." (II. Timothy, c. i., 5.) Sarah Castor, the mother of John Milton [Magnum et Venerabile Nomen], was a woman of incomparable virtue and goodness. Letitia Romilini, mother of Napoleon the Great, was noted for the qualities which she imparted to her son. Lord Byron's mother was noted for her spleen, as she was termed the "unhappy tempered mother." The mother of Gengis Khan, the famous Asiatic conqueror, was noted for her warlike courage and daring. Tamerlane, the greatest warrior of the fourteenth century, was descended from Gengis Khan in the female line. "Arete, the most celebrated woman of her time, on account of the extent of her knowledge, was the daughter of the distinguished philosopher Aristippus, disciple of Socrates. The daughter of the Roman Emperor Caligula was as cruel as her father. Marcus Aurelius inherited the virtues of his mother, and Commodus the vices of his. Charlemagne shut his eyes upon the faults of his daughters, because they recalled his own. Cornelia, the mother of the Gracchi, was a daughter of Scipio. Catherine de Medicis was as crafty and deceitful as her father, and more superstitious and cruel. She had two sons worthy of herself, Charles IX., who shot the Protestants, and Henry III., who assassinated the Guises. Her daughter, Margaret of Valois, recalled her father by her gentle manners. Henry VIII., who put two of his wives to death on the scaffold, had two sons [but one legitimate] distinguished for their meekness of character, and two daughters as cruel as himself. Arete, Hypatia, Madame de Staël, and 'George Sand,' all four had philosophers for their fathers. The mother of Tasso had the gift of poetry. Buffon often speaks of the fine imagination of his mother. The poets Burns, 'Rare Ben Jonson,' Goethe, Walter Scott, Byron, and Lamartine, all were born of women remarkable for their vivacity and brilliancy of language." Shakespeare * is not unmindful of this when he makes Cato's daughter say—

> Think you I am no stronger than my sex,
> Being so father'd and so husbanded?

Herodotus,† in speaking of the Lycians, says: "They have a distinction from which they never deviate, which is peculiar to themselves; they take their names from their mothers and not from their fathers. If any one is asked concerning his family, he proceeds immediately to give an account of his descent, numbering the female branches only." Plutarch ‡ tells us that "a law was instituted among the Xanthians (Xanthia being a part of Lycia), that they should derive their names from their mothers and not from their fathers." Another authority § says, that amongst these people the inheritance descends to daughters and not to sons. And to complete the reversion of the usual ordering of things, according to Beloe, ‖ in some parts of the kingdom, youngest sons inherited the parental estate in preference to their elder brothers.

Viewing this peculiarity in a purely physical light, aside from social and political bias and the accepted usage, there is a very philosophical reason, from what we have shown, why sons should take the names of their mothers, and daughters those of their fathers. In Spain, even at the present time, sons retain their mother's name as a sort of suffix to that of their father's, to indicate their descent in the female line. It is possible that the following complex provision may owe its origin to the same cause, viz.:

* Sedgwick, op. cit., p. 487.
† American Jour. Med. Sci., 1845, p. 346–354.
‡ Cyclopædia of Anat. and Physiol., Art. Vision (White, Cooper), p. 1454, cited in Sedgwick, op. cit., p. 488.
§ Dr. Combe, Trans. of Phrenol. Soc., p. 222, Sedgwick, o. c.
‖ Med. Times and Gazette, p. 359–61, April 12th, 185–, Sedgwick, o. c.
¶ Annales d'Oculist, t. xxiii., p. 43, 1850.
** Dublin Medical Journal, 1825.
†† Ophthalmic Hospital Reports, p. 153, 1858.
‡‡ Embassy to the Court of Ava, vol. i., p. 320.

* Julius Cæsar, act ii., sc. 1.
† Beloe's Herodotus, vol. i., Philada., 1844, p. 218–19.
‡ On the Virtues of Women.
§ Larcher, note in Beloe's Herodotus, p. 219.
‖ Loc. cit., note, p. 219.

"If a man purchase land in fee simple and die without issue; in the first degree the law respects the dignity of sex and not proximity. * * *

"The nearer heir by the grandmother on the part of the father [paternal grandmother] shall have it before the remote heir of the grandfather on the part of the father [paternal grandfather]." *

Darwin† states "that transmission and development, though generally acting conjointly, are distinct powers. . . . . We plainly see this distinction in the many cases in which a grandfather transmits to his grandson, through his daughter, characters which she does not, or cannot possess. Why the development of certain characters, not necessarily in any way connected with the reproductive organs, should be confined to one sex alone—that is, why certain cells in one sex should unite with and cause the development of certain granules, we do not in the least know; but it is the common attribute of most organic beings in which the sexes are separate."

The fact of the frequent resemblance of grandson to grandfather, alluded to by Darwin, and attributed to reversion, we would explain by the resemblance of the daughter to her father, and the son to his mother, for the reasons already given.

The development of secondary sexual characters and others not necessarily in any way connected with the reproductive organs, we would attribute to the difference in the degree of maturation of the ova at the time of fecundation.

"The principle of sexual limitation may be traced in family statistics of mortality from diseases not in themselves hereditary. In a case of measles, affecting the only son of a respectable mechanic, I ascertained that the disease was peculiarly fatal to the females on the father's side, but that the males, when attacked, recovered. The father and his only brother had both recovered from the disease without any unfavorable symptoms, whilst all the five sisters had died from it. The little boy referred to recovered quickly, but his only sister had died the previous year from the disease, which at its commencement was apparently destined, in her case, to prove fatal." ‡

The adherence to the female line in this case cannot be due to greater mortality among females than males, for we find (1845–53) 102 males died of this disease to every 100 females, while in *whooping-cough* § there were only 83 males to every 100 females, which is the only one of the children's diseases in which the proportion of females is in excess. And it is, moreover, one of the most fatal of the diseases peculiar to children, at least a great number die of it. A much larger proportion of females die of whooping-cough than any other disease incident to children.

According to Sedgwick ‖ sexual limitation of hereditary affections and defects is not owing to sexual preference, as the disease or condition is not more easily transmitted to one sex than to the other, but follows a certain law which limits its appearance to that sex in which it first originates.

"On the whole," says Darwin,¶ "as far as I can judge new characters are more apt to appear in the males of our domesticated animals than in the females, and afterwards to be either exclusively or more strongly inherited by the males."

Both the above statements are notably in harmony with the deductions concerning malformations or defects brought out in my last paper,* wherein I showed that a much larger proportion of males than females (161 m. to 100 f.) perish from defective organization or development, and that there are more malformations by defect among males and more malformations by excess among females.

Dr. Smith† says that when the mother and father are equally healthy, and have the same hereditary longevity, the daughters will be longer-lived than the sons; where the mother is as above, and the father is sickly or from short lived stock, the sons will be longer-lived than the daughters.

"It is not true," says Braschet,‡ "that the male children who resemble their mother live longer than those who resemble their father, as Bacon would have it."

Sinclair § contends that it is the mother principally who assures the longevity, and Dr. J. A. Allen is of the opinion that "Longevity of grandparents on the maternal side is to be preferred to that on the paternal side."

I am rather inclined to coincide with the views of Lord Bacon and Dr. Smith, as they are in harmony with the law on the subject; believing, as I do, that males who resemble their father most are effeminate, and females who resemble their mother more than their father are masculine, and being exceptional, and in a certain degree abnormal, entail upon their possessors a weaker constitution than they would have had, had they been properly constituted. Effeminacy and masculinity are too often looked upon as being caused by the easy and affluent circumstances under which a child is reared, but this is only a concomitant, and not the proximate cause,—it is constitutional, arising from too early fecundation of the ovule in the first instance, and too late in the last. Individuals so constituted are consequently worthy of more sympathy than usually falls to their lot.

(To be continued.)

AN ANALYSIS OF THREE HUNDRED AND TWELVE REJECTIONS.

The following is a condensed analysis of all the rejections made by a life-insurance company in this city during a period of twelve months, from Sept. 1st 1872 to Sept. 1st 1873. If in some instances the cause of rejection appears trivial, it should be remembered that in many of these cases there were concomitant circumstances of an unfavorable nature to influence the decision arrived at. All such minor points, however, have been here omitted, in order that a classification might be made of these rejections.

Light Weight.—24 rejected. Average height, 5 ft. 9 in.; average weight, 126 lbs.

Excessive Weight.—Of the entire number 7 were rejected on account of excessive weight. Average height, 5 ft. 7½ in.; average weight, 216 lbs.

Intemperance.—34 rejected.

Heart Trouble.—31 rejected. A little over one-third of these were rejected because of actual organic disease, the remainder on account of persistent func-

* Lord Bacon's Works, v. xiv., p. 191; compare Blackstone's Commentaries, B. 2, c. 14.
† Animals and Plants under Domest., vol. ii., p. 398.
‡ Sedgwick, op. cit.
§ Dr. Tripe, Br. and For. Med. Chir. Review, April, 1857.
‖ Op. cit., p. 486.
¶ "Variations of Animals and Plants under Domestic.," vol. ii., p. 74.

* "The Relative Viability of the Sexes," etc., etc. N. Y. Medical Record, June 16, 1873, p. 502; also July 15, 1873.
† J. V. C. Smith, M.D. "Prize Essay on the Physical Indications of Longevity," N. Y., 1869.
‡ "Physiologie de l'Homme," vol. ii., p. 475.
§ "Principes d'Hygiene, Extraits du Code de Santé," Genève, 1823.
‖ Op. cit., p. 45.

tional derangement of the heart's action—palpitation, irregularity, or intermission.

Spitting of Blood.—17 rejected.

Occupation.—10 rejected. Nearly all of them were tavern or restaurant keepers, or liquor merchants.

Lung Trouble.—30 rejected on account of incipient phthisis, asthma, or bronchitis.

Unclassified.—73 rejections. One on account of a disordered nervous system; one, subject to diarrhœa; five, frequent attacks of articular rheumatism; one, renal calculus; one, curvature of spine; one, recent dropsy of doubtful origin; six, poor physique; one, still convalescent from diphtheria; one, because of a recent illness, resembling apoplexy; one, habitual cough until recently; one, some obscure brain trouble five years previously; one, very difficult labors; one, tumor of the leg of doubtful nature; one, tumor of the hand; two, knee-joint trouble; one, frequent appearance of ulcers on the legs; five, amputation above the knee-joint; one, dyspepsia and occasional attacks of diarrhœa; one, recent pneumonia and persistent cough since; three, double hernia; one, tumor of the testicle; one, jaundice; one, recently operated upon for cancer; three, bladder trouble; one, an infirm old man, representing himself to be only sixty years of age; one, fistula in ano; three, occasional epileptic attacks; three, syphilis; two, kidney trouble; one, chronic diarrhœa; one, enlarged spleen; one, enlarged cervical glands; one, unhealed wound; one, tumor of the neck; one, persistent headaches from a blow on the head; one, aneurism of the external iliac artery; four, recently married, but never yet safely delivered of a child; two, on account of their youth (15 and 16); one, advanced age (66); two, pregnancy; one, residence in Mississippi; one, color (negro); one, 64 years of age and prematurely old; one, prolapsus uteri; one, never vaccinated.

Family History.—86 were rejected mainly on account of their family history.

In three cases, both parents had died of consumption. The average age of the parents at death was 39, that of the applicants, 40.

Twenty were rejected because a parent and one or more brothers or sisters had died of consumption. Average age of applicants, 34; average age of consumptive parents at death, 48.

Thirty-seven were rejected because one parent only had died of consumption. Average age of applicants, 26. Average age of 27 of the number, 23. Average age of consumptive parents at death, 40.

Seventeen were rejected because two or more of their brothers or sisters had died of consumption, and also, in many instances, because they themselves were not in good physical condition. Average age of applicants, 35. The ages of only 36 of the consumptive brothers and sisters could be ascertained. These averaged, at death, 30 years.

Seven were rejected because a brother or sister had died of consumption, and also because they were at the same time in poor physical condition. Average age of applicants, 25. Average age of consumptive brothers or sisters at death, 35.

Two were rejected because insanity had manifested itself in more than two members of the family.

It would be highly interesting to know to what extent the life-insurance companies have suffered by the terrible epidemic of yellow fever still raging at Memphis and Shreveport. Has the expected mortality been materially increased, or not?

Correspondence.

THE INFLUENCE OF AN EXISTING SKIN DISEASE ON THE RISK OF A LIFE ASSURANCE.

To the Editor of The Medical Record.

Sir:—The extremely interesting and valuable papers publishing in The Medical Record on life assurance have not as yet touched on the subject of skin diseases as affecting a risk. It has occurred to me to offer, with your permission, one or two brief suggestions on this subject.

No doubt very many cutaneous diseases cause little constitutional disturbance, and as long as the individual remains unaffected with any acute inflammatory affection, the existence of an ordinary skin disease will not usually diminish the average chance of longevity. But there are exceptions to this; for instance, furunculi, or "boils," or pruritus of the skin, should make us test the urine for sugar, as these complaints are often the forerunners of diabetes, and are common in that disease. The presence of ulcers, if of long standing or extensive, imply a "drain on the constitution," which, as "age advances and nutrition declines, may prove fatal;" hence these cases ought to be declined. Moreover, according to Dr. Fischer, the long continuance of an ulcer is apt to cause Bright's disease. A common affection of the skin—eczema—when chronic, is often no doubt then a purely local disease, so to speak; but we have the authority of Hebra for stating that females subject to repeated attacks of eczema usually die from cancer. With regard to acne, a frequent complaint in young people, Dr. Tilbury Fox (Manual of Skin Diseases, page 399) states: "It has been my lot to see the subjects of the most severe and obstinate acne I have met with in young people die of phthisis. I cannot but think that lymphatic subjects, and those who are of a phthisical tendency, are most prone to acne." I may apply the same remark to an allied affection—mollusc sebaceum. I have had cases of it at the Belfast Hospital for Skin Diseases. Two I well remember—healthy, intelligent-looking young girls, aged about 18 years, who died of phthisis. Again, I think the presence of pityriasis versicolor, which occurs usually on the chest, should make us be careful, no matter how healthy the individual. There is in these people an acid state of the secretions, especially of the perspiration, and which is common to scrofulous persons. This favors the development of this parasitic disease; and how frequently, at least in this country, do we observe pityriasis versicolor on the chests and backs of consumptive patients? Morphœa and atrophy of the skin show a degradation of tissue, and want of healthy nutrition. Pustular inflammations are a sign of debility, generally assimilative, and always improve with tonics, such as quinine and iron. Moreover, these pustular affections are often connected with a gouty taint. The slightest darkening or *bronzing of the skin* would point to Addison's disease, which is incurable. Trousseau states in his "Clinical Lectures," that old people who are asthmatic, exhibit in their youth eruptions of an eczematous character, and that eczematous eruptions, gout, and rheumatism are complaints which may be replaced by asthma, and replace it in turn. A few other diseases of the skin may be mentioned. Thus erythema, especially of the face, as noted by Dr. Brinton, is important. The form referred to exhibits itself by a peculiar color of the

cheeks in middle-aged people, due to little streaks of distended blood-vessels, which give the part a mottled appearance, and which is often connected with kidney disease. In heart complaints a bluish-red color of the face is often noticed. Idiopathic erysipelas must not be omitted, owing to its liability to return. Xeroderma, or a dry, harsh, somewhat scaly state of the skin, having the appearance of seldom being washed, owing to the absence of perspiration—a disease usually congenital—is incurable, and those affected therewith are subject to congestion of various organs, chiefly the kidneys and lungs. To conclude with merely mentioning a few other diseases, which would render a life unfavorable: Commencing elephantiasis arabum; gutta rosacea, due to assimilative debility, so often brought on by intemperance; herpes zoster, or more correctly the marks of a former attack, as there is in this disease always more or less structural change in the nerves, and often permanent anæsthesia (see a paper by Dr. McCrea, of Belfast, *Brit. Med. Journal*, July). Pityriasis capitis oleosa is always accompanied by more or less anæmia, discoloration of the skin, showing site of former ulcers or wounds. Incurvation of nails point to debility, and is present in phthisis and aneurism. Syphitic eruptions and staining, lupus, leprosy, and scrofuloderma conclude the list.

Apologizing for the length this letter has already extended to, I remain, Yours, &c.

H. S. PURDON, M.D.

5 COLLEGE SQ., EAST, BELFAST, IRELAND.

SAN FRANCISCO, August 29th, 1873.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—I have regularly received your Journal since May 15th, which number contained the notice that the . . . . . Life Insurance Co." had directed you to send me the RECORD for one year at their expense. I am very glad to have the RECORD added to my list of Journals, and as I am a great believer in the importance of "life assurance" to society, and am particularly interested in the relations that the medical man occupies to the business of the institution, I am doubly glad to receive the RECORD with its new department of life assurance.

I have therefore great pleasure in tendering my thanks, through you, to the company for so kindly remembering their medical examiner of San Francisco.

At some future time I will, with your permission, have something to say in regard to the grounds taken by some of the writers, in articles that have appeared in the new department. In the mean time allow me to call your attention to an article in *The Insurance Monitor*, of New York, for July 1873. The article is headed "A New Source of Danger to the Health of the American people," and commences as follows: "San Francisco is justly alarmed over a new evil, resulting from Chinese immigration. That loathsome disease of Eastern countries, the leprosy, has appeared in the city, and lepers are constantly to be met with in the streets," etc., etc.

Had this article appeared as a chapter in Mark Twain's *Roughing It*, it would pass for a very good joke on San Francisco; but when the *Monitor* allows itself to be so imposed upon, it certainly becomes some one's duty to enlighten them on the subject.

The facts are these: We are upon the eve of a municipal election, and politicians must discover a bait that voters will take to. No bait is better adapted to catch a certain class of votes than the Chinese question. If a Doctor wishes the Coronership, the more cases of leprosy he discovers and reports, the better his chances are for Coroner with a certain class of voters.

There have been from three to six lepers in this city for the past ten years; one or two cases American, formerly residents of the Sandwich Islands—the others Chinamen. I hardly think that it will be necessary for insurance companies to add an extra percentage to their California risks on account of leprosy, as the disease will rapidly disappear from our streets for a year or two as soon as our election is over.

W. F. MCNUTT, M.D.

Miscellaneous.

RECENT CHANGES IN THE FORM OF THE APPLICATION AND MEDICAL EXAMINER'S REPORT.—Several of the companies have recently adopted new forms of "application and medical examiner's report." Among other new features we notice that the new "John Hancock" application does not contain a single medical question, these being all incorporated into the medical examiner's report, where they properly belong. By this radical change the company will be far more likely to obtain full and precise information in regard to the applicant's past history and present physical condition than by means of the blank forms now generally in use among the companies.

Another important change has been introduced by the "Universal Life-Insurance Co." The question embodying this new feature reads, if we recollect rightly, very nearly as follows: Are you willing that your medical attendant should, in the interest of the Universal Life-Insurance Co., state fully all the facts in his possession relating to your condition of health, past history and habits? The evident object of this question is to release the physician from the obligation of his professional oath and thus enable him to communicate any information that may be of value to the company in forming an estimate of the character of the risk.

SEPARATE MEDICAL EXAMINERS' REPORTS.—At a recent convention of all the principal agents of one of our New York companies, the question was submitted —"whether it would not be for the best interests of the company to have the medical examiners' reports sent directly to the home office, separate from the application?"—The objection raised was that it would in many instances seriously delay the issue of the policy, and accordingly it was unanimously determined that the best (?) interests of the company demanded no change in this particular.

MORTALITY CHARTS.—A series of mortality charts are among the improvements of the last census. The relative mortality from the various diseases in different sections of the country is shown in colored shadings. Perhaps the most remarkable feature about these charts is the system of compensation. Sections having the lightest shade of one color are deepest dyed with another. What consumption is to the North, malaria is to the South. The general result from these interesting charts is, that the healthiest portion of the country is in that central region stretching through West Virginia and Tennessee into Upper Missouri, along with the extreme Northwest on the borders of Lake Superior.—*Insurance Monitor.*

Original Lectures.

A LECTURE

ON THE USE OF PLASTER-OF-PARIS IN THE TREATMENT OF FRACTURES.

DELIVERED IN THE SPRING COURSE OF LECTURES IN THE COLLEGE OF PHYSICIANS AND SURGEONS.

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GENTLEMEN:—In my last lecture I told you that in the treatment of fractures we have three indications to follow: 1st. To place the fragments of bone as nearly in their normal position as possible; 2d. To retain them in this position; 3d. To attend to the local or constitutional complications which may arise during the course of treatment. The execution of the *first indication* is what we call "setting" a fracture; and I told you that you should set a fractured bone as soon as possible. In the majority of cases there is no difficulty, and the whole operation of "setting" consists merely in moving the limb from a bent to a straight position. In other cases, where there is overlapping of the fragments of the broken bone, you will have some difficulty in reducing them; extension and counter-extension must here be resorted to, and in some cases it will be necessary to etherize your patient before you succeed.

After reduction, you take means to fulfil the *second indication*, namely, to retain the fragments in their normal position. This can be accomplished by apparatus of various kinds: splints of wood, tin, gutta-percha, leather, felt, &c., may be used; or you may apply splints or dressings made of plaster-of-Paris, starch, or silicate of magnesia, or liquid glass, as it is called. The use of plaster-of-Paris has become so general in the treatment of fractures, that it becomes necessary for me to enter into full details of the methods of its application.

The employment of this substance for fracture dressings is not new. It has been used for very many years, and has been applied in various ways. As far back as the close of the last century it was used by the Arabians.

In Europe it was introduced by Hendricks at the hospital of Gröningen in 1814, and since that date has become one of the standard means of treatment in many of the hospitals throughout Europe.

In this city, fractures treated with plaster-of-Paris by "Pirogoff's method" were reported by Drs. Gluck and Weber in 1855 and 1856. A new method of applying the plaster was introduced into the New York Hospital by myself in 1861, and in that year a full description of its use and application was published in the *American Med. Times*. I also wrote a monograph on this subject which was printed and widely circulated by the Sanitary Commission just before the close of the war.

I also read a report on the use of plaster-of-Paris in surgery before the American Medical Association, at the meeting in Cincinnati in 1867, which was published in the report of the association for that year.

In this college its use has been taught yearly since 1861 by Prof. Markoe, and also by myself in the spring course. I mention these facts because several papers have recently been written in regard to its use in Bellevue Hospital, and in which no allusion has been made to the method which I have introduced and practised. Dr. Saml. B. St. John, a graduate of this college, and afterward resident surgeon of Bellevue, in a paper on "Plastic Apparatus in Surgery, with especial Reference to that variety made with Plaster-of-Paris," published in the *American Journal of Med. Science* in July, 1872, in giving the history of the use of plastic apparatus from the time of Hippocrates down to the present day, makes no mention of the important application of plaster-of-Paris in this city. Prof. H. B. Sands, in a paper on the "Use of the Plaster-of-Paris Bandage in the Treatment of Fracture," published in the *New York Med. Jour.*, June 1871, states that he considers the method which he describes "*superior to that advocated by Pirogoff, which found favor at the New York Hospital some years ago.*" Dr. Sands evidently here confounds Pirogoff's method with that of which I have been speaking, Pirogoff's method never having been used in that hospital to my knowledge. The difference between Pirogoff's and my own method is this: Pirogoff, after bandaging and padding the limb with cotton, applies strips of coarse linen saturated with a solution of the plaster, lengthwise to the limb. These are retained in place by crosswise strips similarly prepared, thus making a *permanent* and *immovable dressing*. My method, which I will describe in full, later in this lecture, consists in the formation of plaster splints, which are applied directly against the integument, retained in position by a dry roller bandage, and which may be removed and the limb inspected at pleasure.

Now, gentlemen, if you will give me your attention, I will describe in detail and show you the application and use of, first, the plaster bandage, and afterwards the plaster splint.

THE PLASTER BANDAGE.

This is made by rubbing the dry plaster into the meshes of the muslin of which the bandage is made, and then rolling this up the usual way as an ordinary roller bandage. The plaster bandages thus prepared should be kept from contact with the air, rolled up in tinfoil until they are wanted, so that the plaster will not absorb moisture and thus become unfitted for use. Before applying this dressing, the limb should be carefully and evenly padded with old flannel, or a layer of cotton batting applied with a roller, and then the bandage, which having been previously placed in a basin of water to become saturated, should be applied as you would apply a dry roller bandage. Several plaster bandages should be used, and it is well to sprinkle dry plaster between them, and wet it, in order to give greater solidity to the whole. This is known as Mathiesen's method of applying plaster, and is at present in use at Bellevue. As far as I know, Dr. Robt. F. Weir was the first in this city to apply this form of plaster dressing to fractures. While resident surgeon of the New York Hospital he treated several cases of fracture by this method; but for some unknown reason the treatment fell into disuse until revived again at Bellevue.

Let me now show you in detail how to apply this plaster bandage (the lecturer here enveloped one arm of the manikin in the dressing described). After the application, the limb should be firmly held in position until the plaster "sets," and makes a firm hard splint. The plaster used for this bandage should be the superfine quality.

In order to remove these bandages, a strong pair of cutting pliers is necessary. This instrument which I show you, is one constructed for the purpose by Dr. Henry, of this city.

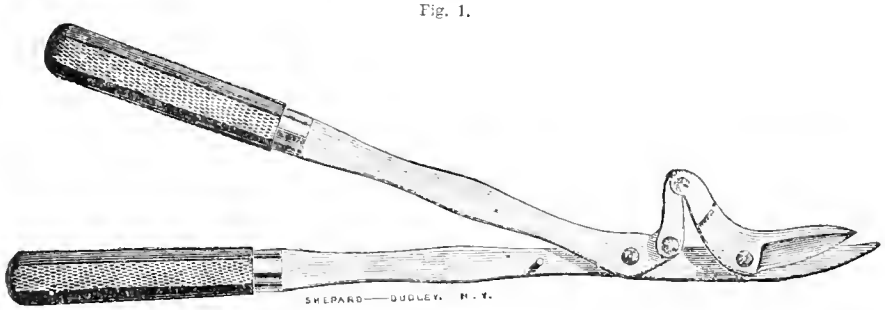
Here is another (Fig. 1) which was introduced by Dr. Victor von Bruns, Prof. of Surgery in Tübingen, made by Shepard & Dudley in this city. It is strong, and of great power, cutting the plaster bandage with ease and rapidity, and is used in St. Luke's, Roosevelt, and Bellevue Hospitals.

The principal disadvantage of this method of treating fractures is, that it conceals the limb entirely after its application.

In applying this method of plaster dressing, we should first cut a paper pattern of the size and shape of the splint required, and from this paper pattern we cut the Canton flannel or muslin. Two or three thicknesses of muslin, or two of thin bleached Canton flannel, make the best splints. A material like mosquito netting is sometimes used, but I have found it makes the splints too brittle, so that in moving them to examine the limb, they are liable to crack, and thus lose their value as splints.

The Canton flannel being cut of the requisite size and shape, and the limb being shaven or oiled to prevent the hairs from adhering to the splint, the plaster

Fig. 1.



At Bellevue it is applied as soon as the fracture enters the hospital, and if put up properly and with care, produces no harm; but if great care is not taken in its application, there is danger of interference with the circulation by the swelling of the limb. This plan of putting up recent fractures in tight immovable dressings, is one which I would not recommend for adoption in private practice unless you have had ample hospital experience. It is better to place the fractured limb in some open dressing, and wait a few days until the swelling has to a certain extent subsided; then you may safely apply this or some other immovable dressing. *Do not, then, put up recent fractures in tight dressings.* To be sure, only one case of gangrene has occurred in Bellevue, and that was an out-patient who failed to report as directed, and who returned after the mischief had been done—so says Dr. St. John; yet, gentlemen, I have seen several cases of severe ulcerations produced by this form of bandage; and in one case where the apparatus was applied in Bellevue, a slough took place over the heel of the patient which took months to heal. My advice, then, to you is, not to apply any dressing to a fracture that is likely to produce harm, even should the patient neglect to follow your advice.

I will now call your attention to the second way of using the plaster, namely,

THE PLASTER SPLINT.

Here you will incur no risk in the application. By this method splints are made of muslin or Canton flannel, saturated with a mixture of plaster-of-Paris and water.

In this way you can construct light but strong splints, fitting the limb with an accuracy unequalled by any other splint, and holding the fragments of bone in perfect apposition, at the same time permitting us to inspect the limb at pleasure.

The application of these plaster splints was first introduced into this city by myself, while resident surgeon of the New York Hospital, and for certain fractures they answer a better purpose, in my opinion, than any form of dressing that we have at the present time.

is then to be mixed with water. Equal parts, by measure, of water and plaster, say one pint of each, make the mixture of the right consistency; it should not be thicker than cream.

Should it be desirable to have it "set" rapidly, a small quantity of common salt (a teaspoonful to the above mixture) should be added while stirring.

If, on the other hand, you wish for any reason to delay the process of "setting," the addition of a small quantity of cream of tartar will effect this result.

The Canton flannel or muslin is now placed in the mixture and thoroughly saturated with it. It must then be removed, placed on a board or table, and smoothed out with the hand; the two pieces being accurately laid on each other, and being neatly pressed, they are applied to the limb directly against the integument, and adapted by the hands to the parts, while a roller bandage is snugly applied. This done, *the limb must be held in position until the plaster becomes hard.* This takes from five to fifteen minutes.

It is better to remove the roller bandage as soon as the plaster sets and apply neatly a dry one, else the one put on the wet plaster will be removed with difficulty when thoroughly dried.

A splint made in this way is light and elastic, and although applied directly against the integument, produces no excoriation; in a word, it combines all the advantages of the plaster bandage, with the additional one of allowing the limb to be inspected when desired. If the limb shrinks, owing to subsidence of the swelling, and becomes loose in the splint, all you have to do is to remove the roller bandage and reapply it tighter than before.

Now, gentlemen, I will bring a case before the class and show you the application of the plaster dressing we are now discussing. Here is a boy four years old, who four days ago fell from a bale of hay and sustained a fracture of both radius and ulna of the right forearm. It was an *incomplete fracture*, or what is called a "green-stick fracture." The forearm was bent near its middle, and on examination no false point of motion or crepitus could be detected. You remember I told you in my last lecture, that both of these symptoms in this kind of fracture were absent

until after you had bent the bones back to their normal position, and then in many cases you would feel a distinct cracking of the bones, and the fracture would be made complete. That occurred in this case, so that we have now a *complete* fracture of both bones of the forearm at about their middle. As a temporary dressing, the forearm was placed on a straight splint, well padded and retained in position by strips of adhesive plaster. Had the case not come to my office in the middle of the day, when I was otherwise engaged, I could have applied, and it would have been better to have done so at once, the plaster splint which I am about to show you. I applied, however, a *provisional* dressing; and here let me say to you, that you should always be ready with some form of temporary dressing for fractures in all parts of the body, so that when called to a case you can at once do something to make your patient comfortable; afterward you can prepare at your leisure a dressing more effective.

Now to return to the dressing of this fracture. I cut out a paper pattern so shaped as to leave the upper or radial border of the forearm uncovered by the splint, and then cut two thicknesses of the Canton flannel of the same shape. I now mix the plaster and water, add a little salt to facilitate the "setting," and saturating the Canton flannel in the mixture, place it on this board, and with my hand smooth out the wrinkles and the excess of plaster. I now apply it under and around the fractured arm, and smooth it well around the limb, while my assistant holds it in position. At the lower end I find the splint a little longer than necessary, and turn it over a half inch, which gives me a rounded and smoother edge.

I will turn back the edge near the elbow also, for the same reason. Now, while my assistant holds the limb straight, I apply a roller bandage two inches in width snugly around the limb. You notice the drops of soft plaster oozing through the bandage as I apply it. Now I take the limb from my assistant, and seizing the forearm just below the elbow with my left hand, and the hand of the patient with my right, I make extension sufficient to keep the limb straight until the plaster sets. In some cases where there is much tendency to displacement, I have my assistant press with two flat wooden splints the palmar and dorsal surface of the limb, while I keep up moderate extension. This shapes the splint so that the muscles are forced in between the bones, following out the same indication formerly fulfilled by interosseous pads.

Now, gentlemen, although not five minutes have elapsed since this splint was applied, it has already become hard, so I remove this wet roller bandage, and there you see a beautiful splint, holding the limb perfectly straight. (Fig. 2.)

A dry roller is now snugly applied, and the patient is in the most comfortable condition possible: the coat-sleeve can be pulled down over the arm, which should simply be suspended in a sling. If this dressing be applied before swelling takes place, the roller can be left off and the splint retained by a couple of strips of muslin loosely tied near the elbow and hand, and lotions can be applied to the swelling.

The after-treatment consists merely in reapplying the roller bandage whenever the limb seems to be loose in the splint. This form of dressing may be used satisfactorily in cases of fractures about the elbow-joint, or in fractures of the forearm and fingers. For fractures of the leg, in my estimation, there is no better dressing. It can be applied at once if desirable, and as the splint does not encircle the limb, there is no danger from undue compression. The patient can go about on crutches at once. I generally prefer, however, to place the limb in a pillow or fracture-box for a few days before applying this dressing.

Fig. 2.

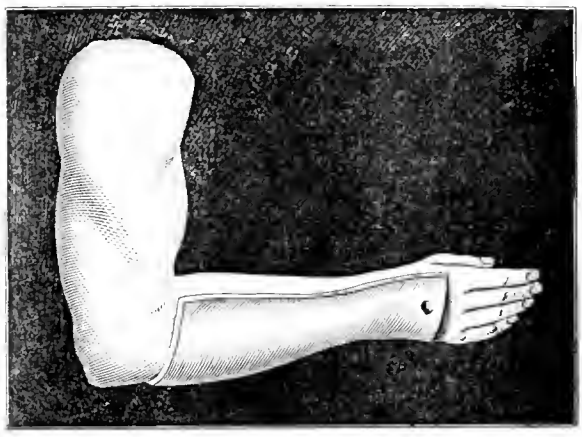
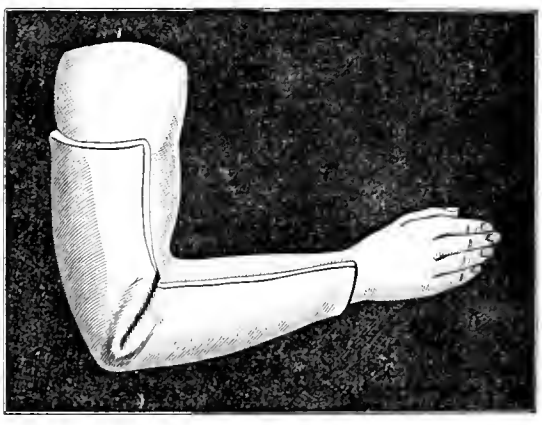


Fig. 3 shows this form of splint applied to the elbow, and Fig. 4 to the leg. Remember, these are retained to the limb by a roller bandage.

Fig. 3.



In fractures of the humerus, I use coaptation splints and bandages; but if in any case I should want to apply the plaster dressing, I would use the *plaster bandage* as described in the first part of this lecture.

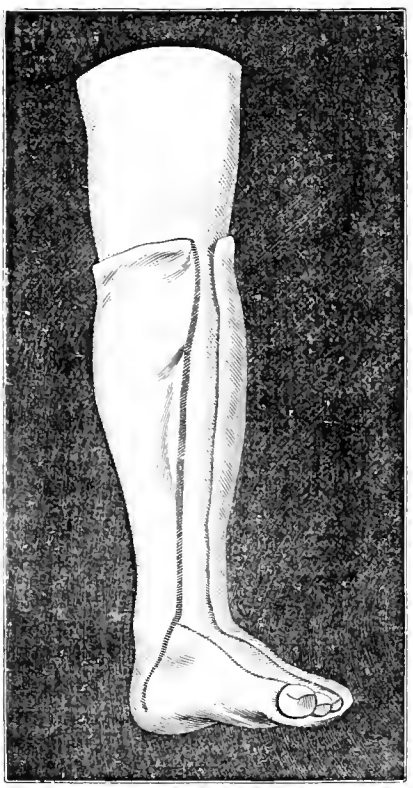
Dr. Buck's extension apparatus, for the treatment of fractures of the thigh in the lower and middle third, and the triple inclined plane, for those seated near the upper third of the shaft, leave little to be desired.

I use both these appliances in the first part of the treatment of such fractures, and after union has become moderately firm, often apply the *plaster bandage* from the toes to as high as possible on the thigh, thus allowing the patient to walk on crutches at a comparatively early date.

The immediate treatment of fractures of the thigh by plaster bandages, as now used in Bellevue Hospital, and described by Drs. Sands and St. John, is one that I think cannot be made practicable outside of a hospital, as it depends for its efficacy on the use of a peculiarly constructed bed, called the stretcher, on which the patient is placed, and while under the influence of ether, and strong extension made with the pulleys, this dressing is applied. The only advantage that I can

see in this form of dressing is, that it allows the patient at once to leave the bed and go about on

Fig. 4.

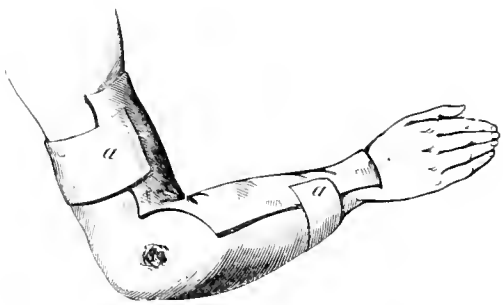


crutches. Dr. Buck's apparatus is simple and can be applied in a few minutes, in any room which will hold a bed; and it is seldom necessary to etherize your patient. To be sure, your patient must keep his bed, but he may sit up, and I seldom find patients complain. After the fourth or fifth week I think we have gained all we can by extension, and then you can apply the *plaster bandage* without resorting to ether and extension with pulley, and then your patient may go about on crutches. In another lecture I will show you how to apply Dr. Buck's apparatus.

I might also state that you can construct plaster splints of any shape for the treatment of diseases of the joints; and after resection of joints, no better form of dressing can be used. I will also call your attention to the use of plaster in the treatment of club-foot. I believe I was the first in this city to use it for this purpose. In young children it is rarely necessary to perform tenotomy, for the deformity can be overcome by gradually stretching the tendons by putting up the foot in plaster dressing, and holding the limb in position while the plaster "sets." I have here a little patient who has talipes-varus of one foot, and I will show you how to apply this dressing. I will use the plaster splint made of two thicknesses of thin bleached Canton flannel, although the plaster bandage would do as well. You see I have cut out the Canton flannel so that it will not completely surround the leg and foot. Now, after saturating it in the plaster I apply it directly against the integument, and apply the roller, while Dr. Maynard holds the foot as straight as possible. Now I take the foot in my own hands and stretch it around to, as nearly as possible, its normal position, and I will hold it so until the splint becomes hard. Now it is getting warm, and I know that when heat is developed the setting is firm. I will take off the outside roller and you see the foot and leg partially enveloped in this fine casing. I advise that this be left on a week and then removed, and another applied, and the position of the foot improved. When the foot can be easily brought to its normal position I resort to the use of some form of club-foot shoe.

In conclusion, I would say that in the treatment of compound fractures, the plaster-of-Paris dressing fulfils a most important indication—namely, *allowing us to dress the wound without disturbing the fractured bone.* It can be applied by either of the methods which I have described, and fenestræ cut out so that the wound can be exposed and dressed as often as desired.

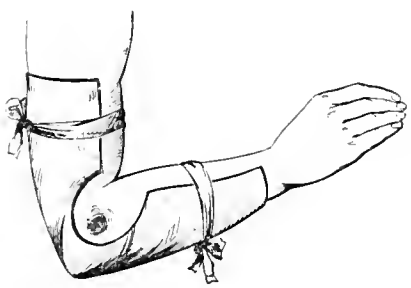
Fig. 5.



In the diagram (Fig. 5) you see a plaster splint applied to the anterior surface of the arm and retained by transverse bands, *a a*. The case was one of a gunshot wound of the elbow. The wound you see could be readily dressed, and the dressing retained by a bandage. In this case the splint was not removed for over one month.

In this picture (Fig. 6) you see a splint applied to

Fig. 6.



the posterior aspect of the elbow and retained by strips of muslin tied around at the upper and lower ends of the splint.

That bell warns me, gentlemen, that the hour is up. I will therefore conclude this lecture by stating that the great advantage of the plaster-of-Paris, in whatever way applied, over all other forms of dressin s for fractures, is: *Its property of hardening rapidly*, allowing us to hold the fractured limb in its normal position until the plaster "sets." No other substance possesses this property in such a degree. Starch takes from 24 to 48 hours before it becomes hard. Liquid glass, which makes a beautiful-looking dressing, also takes some time before it solidifies.

Original Communications.

A CASE OF PENDULOUS TUMOR OF THE FOREHEAD AND TEMPLE.

By GURDON BUCK, M.D.,

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Miss R. R., æt. 35, a resident of New York City, has a pendulous tumor, arising from the right half of the forehead and adjacent temple, and encroaching upward somewhat upon the hairy scalp. It stands out more than one inch from the surface, and in the process of gradually gravitating toward the cheek it has become invested with the upper eyelid, which is spread out on its surface. In its further descent it has also dragged downward the eyeball itself partly out of the orbit. The tarsal margin of the upper lid, which overlaps and conceals the under lid, forms the lower boundary of the tumor, and descends upon the cheek to within a finger's breadth of the edge of the right nostril. The eyebrow is spread out upon the surface of the tumor, and is situated one inch below its natural level.

Fig. 1.

The skin covering the tumor retains its natural color, is very supple, and can be gathered into loose folds between the thumb and fingers. The substance of the tumor itself is of moderately firm consistence and loose texture, and slides freely upon the surface underlying it. When grasped in the hand it has almost the pliability of the scrotum. On separating the lids the eye is found of natural appearance, and possesses good vision. When patient was an infant a few months' old, her mother first noticed a somewhat elevated ridge across the right half of the forehead, which increased very gradually, and spread out to its present dimensions. Its growth became more accelerated, her mother thinks, after her recovery from a dangerous illness in childhood, for the treatment of which she was profusely salivated. When eleven years old an operation was performed, and a portion of skin of the size of a silver quarter of a dollar excised, but without any benefit. Other growths, varying in size from a small pea to a cranberry, are scattered upon the limbs and body. One of these growths of a pendulous form, near the fold of the right elbow, patient allowed to be removed for microscopic examination prior to the performance of an operation on the face. Unfortunately, a memorandum of the result of the examination was lost. It was, however, ascertained that there were no cancerous elements in its structure. Patient's general health being favorable, the first operation was performed 13th January, 1869.

FIRST OPERATION.

A transverse incision, commencing above the left eyebrow, was carried across the tumor along the middle of the forehead to the right temple; a second incision, commencing above the right temple, was carried vertically downward to the upper part of the cheek, joining the first incision at its terminus on the temple, the two incisions forming a letter T laid upon its side. The angular flaps of skin thus formed were dissected up from the surface of the tumor to its margin above and below. The tumor itself was then raised at its circumference from the underlying surface, and a prolongation of it, extending into the orbit under its roof, was dissected out. No large vessels were encountered, nor was the hemorrhage from small vessels considerable. Ligatures were applied to all vessels requiring it. After the removal of the tumor the redundant skin was pared away, so as to permit a good adjustment of the flaps to each other. Numerous thread sutures were then inserted to secure the adjustment. A good result followed, with primary union at almost all points.

SECOND OPERATION.

April 8th. A flattened portion of the tumor, situated high up on the right temple, not having been included in the previous operation, a second operation, of only limited extent, was performed for its removal, and was followed by prompt healing of the wound.

Fig. 2.

THIRD OPERATION.

Performed 28th April, 1869. The right eyeball was attacked with acute inflammation, which proceeded rapidly to disorganization of its internal structures. The eyeball was therefore extirpated, and at the same time some remaining portions of the morbid growth removed. A good result followed the operation, but the remaining conjunctival cavity unfortunately was not sufficiently capacious to permit the insertion of an artificial eye. Patient's condition was examined as late as 11th September, 1873, and found to be as follows: She enjoys ordinary good health. There has been no reproduction of the morbid growth that was removed from the forehead and temple. The cicatrices left by the incisions are linear and quite indistinct. The right eyelids are habitually closed and flattened. Fig. 2 is from a photograph taken nearly two years ago, and faithfully represents her present condition.

46 WEST 29TH STREET, NEW YORK.

CASES IN PRACTICE.

FROM A PAPER PRESENTED TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

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CASE I.—The patient was a charming little girl about five years old; but, unfortunately, her beauty was marred by an extensive white spot over the pupil of one eye. Beside this leucomatous opacity of the cornea, the eye was deviated inwards. The strabismus was unquestionably caused by the leucoma.

The mother of the child, herself the daughter of a physician, was in a state of anxiety, her mind having been alarmed by a professed oculist with the strange representation that the safety of the well eye was jeopardized by the condition of the defective eye, and that the latter should be taken out for the security of the other! The cheering compensation was held out, besides, that a glass eye *would look better* than the natural one! She naturally shrank from such heroic measures.

I said to her at once that the child's eye was invaluable, although seriously blemished and defective, and that its usefulness might be measurably restored by an operation for artificial pupil. I told her, likewise, that the squint could be corrected, and the white spot be in a great degree, or entirely, obliterated.

Accepting my views, the mother desired the operation to be done for an artificial pupil. Accordingly the patient was etherized, and a portion of iris was excised on the nasal side, with the result of restoring valuable sight. Further remedial measures were postponed for a while, but in the meantime domestic considerations took the parties away for a time, and further interference with the eye is still in abeyance.

The obliteration of a white spot on the cornea by tinting, when it gives no promise of disappearing spontaneously or by artificially caused absorption, is indicated not merely in order to get rid of a blemish, but also as a means of improving vision. The diffused light which it produces within the eyeball disturbs vision like a glare of excessive light in front of the eye, while at the same time the image of the opacity cast upon the retina is projected as a cloud between the eye and any object looked at. In cases of slight nebulæ on the cornea, which might escape the observation of an expert even, unless oblique illumination were employed, the dimness of sight which exists is the result of such projected cloud. The benefit obtained by coloring the white spot on an eye with dark pigment is exemplified by the following case:

CASE II.—A blacksmith, about forty years of age, called on me at the Eye and Ear clinique at the Troy Hospital. He presented an opacity upon each cornea, perfectly white at the centre and shading off into a nebulous periphery. On the right eye the spot was more extensive than on the other. He had undergone an iridectomy, performed by my former distinguished preceptor, Sir William R. Wild, of Dublin. The artificial pupil made by this skilful operator gave him useful vision in the left eye, but the sight of the right eye was not equally improved.

The patient represented that the appearance of his eyes, with a conspicuous white spot on each, operated as a hindrance to him in securing employment at full wages, for a doubt of his ability to see as well as he really could, arose wherever he applied for work.

In order to relieve him from this embarrassment a process of tattooing was commenced on the white spot of the right cornea. It was repeated twice a week for several successive weeks, until the white opacity was finally supplanted by a dark indelible stain. The personal appearance of the patient was greatly improved by the change, but, more than this, he remarked that his sight had been benefited by the operation, and he desired that the same process of tattooing the eye should be practised on the smaller white spot of the left eye.

The operation is a little tedious if judiciously done, for, in the opinion of the writer, too many points of puncture for pigmentation may be made at a sitting, and provoke so much irritation as to jeopardize the safety of the eye from consequent inflammatory reaction. By contenting himself with tinting a little at a time, the writer has avoided any untoward results.

The removal of the eyeball, in the case of the little girl mentioned above, would have radically removed the squint, to be sure! but the folly, as well as heinousness, of such cruel ophthalmic surgery as the proposed extirpation of an eye possessing latent usefulness, because its looks were blemished by a white spot, is demonstrated by the success of the operation for an artificial pupil, and the improvement of appearance obtainable from tinting a white opacity. In the advanced condition of ophthalmic practice to-day, it is remarkable what ignorance or wantonness is sometimes encountered.

Reports of Hospitals.

BELLEVUE HOSPITAL.

NOTES OF PRACTICE AND PECULIARITIES IN TREATMENT.

LUXATION AND FRACTURE OF CLAVICLE.

FRACTURE of this bone belongs to a class of injuries which has long taxed the ingenuity of surgeons to invent some apparatus for its treatment, which could be easily worn by the patient, would be simple, and at the same time efficient.

A very elegant, comfortable, and efficient dressing for fracture of the clavicle consists in the use of ad-

hesive plaster according to the method devised by Prof. Sayre. It is equally applicable as a dressing for a luxated clavicle, and consists of adhesive plaster used in a manner described briefly as follows:—

Cut two pieces of adhesive plaster three to four inches in width and of sufficient length to permit one to pass around the arm and around the body, the other to pass from the top of one shoulder obliquely around the body, embracing the olecranon and terminating at the point of beginning. Maw's moleskin plaster is the best, if it can be obtained.

The first strip of plaster is made to surround the arm upon the side of the fracture, just below the axillary border, leaving a space posterior uncovered forming a loop which is fastened with pins or stitches. Then the strip is carried about the body, and brought back to a point at which it may be again fastened to prevent its slipping.

The point insisted upon in the application of the first strip of plaster is this: the arm, after the loop is made around it, is to be drawn downward and backward until the portion of the pectoral muscle attached to the clavicle is sufficiently placed upon the stretch to counteract the action of the sterno-cleido-mastoid muscle. This will bring the clavicle down to its level. Then the strip of plaster is carried around the body and fastened, as indicated above. The second strip of plaster is applied as follows: Commence at a point a little on the front side of the sound shoulder, and carry it obliquely across the back to the elbow of the injured side. At that point a slit should be made for the reception of the olecranon process. Now, passing over the olecranon, and at the same time pressing the elbow firmly forward and inward, carry the plaster over the forearm, which is made to lie obliquely across the chest in the direction of the breast opposite the injured side, and cross the shoulder at the point of beginning, where it may again be fastened, if necessary, with pins or stitches.

This makes a cheap and efficient apparatus. A difficulty attending its adoption is the difficulty of obtaining serviceable adhesive plaster.

CHRONIC SUPPURATIVE DISEASE OF THE KNEE-JOINT.

An interesting class of cases met with in this hospital is what is commonly called "white swelling," or chronic suppurative disease of the knee-joint. There is scarcely a practitioner, who has been engaged at all in general practice, who has not met one or more of these cases. The general appearance of these joints is too well known to require any special description. The case which we are now specially regarding was in a little girl about eleven years of age, who had once been operated upon. During the early progress of the disease in her case, no extension and counter-extension were employed, and the result was that the limb became so flexed that the heel was nearly in contact with the nates. The joint was freely opened, free discharge ensued, tendons divided, and the limb placed in a straight position.

The case formed no exception to the general rule that "white swelling" in all cases is dependent upon some constitutional trouble. The discharge from the joint has been free, and consisted almost entirely of broken-down material. There had been extensive burrowing of pus among the muscles and fasciæ of the thigh, until sinuses were formed, extending up nearly to the trochanter major. After the first operation the extension was removed a little too soon, and the limb again began to flex slightly.

This is an important point in the after-management of these cases. After the limb has been placed in a straight position, or in a *proper* position, if anchylosis is to result, it is important to keep up extension until the parts have got ENTIRELY WELL.

Another important point in connection with this case, and one not infrequently met with in this class of cases, chronic suppuration, connected with diseases of the bones, consists in the fact that this patient became the subject of general anasarca, and the urine contained waxy casts and albumen. In such cases the question arises, should an operation be performed or not, in view of the existence of renal disease? One way of regarding this class of cases is this, that the renal disease is dependent upon the existence and progress of the chronic suppurative disease of the joint, which is doubtless true. If now the discharge from the joint can be arrested, there is a chance for an improvement in the general health, and with that, an improvement in the condition of the kidneys. The present case proves the tenableness of this view, and is an illustrative case. It does not, as experience proves, absolutely and essentially make it a fatal case, because there are waxy casts and albumen in the urine; but, on the contrary, it may be expected in some cases, at least, to get relief from the renal disease by means of the operation. Of course constitutional treatment in these cases is all-important, but we are addressing ourselves more particularly to the surgical considerations.

Another practical point, suggested by the handling of this limb, is that the manipulations give the patient some pain, which is evidence that there is still some motion left in the joint. Sometimes the motion which may be left will be very slight indeed, but it is important to determine whether complete anchylosis has taken place or not. It is sometimes difficult to decide this point, and in the preliminary examination preparatory for the operation, it is well that it should be done without the use of an anæsthetic, for oftentimes the surgeon may be able to tell whether there is motion or not in the joint by the sensibilities of the patient. The patients are able at times to detect by their feeling the existence of motion which the surgeon will be unable to recognize by his manipulation, and the decision of the patients upon this point can generally be relied upon, for they become extremely interested in whatever is intended for their benefit. The after-treatment of these cases consists in complete rest in bed, extension and counter-extension, application of ice or cold cloths, latterly compression of the joint, and, embraced in the primary dressing, partial compression of the femoral artery, leaving just enough circulation to vitalize the parts.

The extension and counter-extension is, at first, kept up by means of the perineal band and adhesive plaster applied to the leg, to which weights are attached over the foot of the bed.

After all acute inflammatory action has subsided, or the time has passed for its accession, the limb may be placed in a Sayre's splint, and then extension can be regulated in the most perfect manner, and the patient may soon be moving about. In the application of this splint there is no adhesive plaster that will scarcely in any degree prove satisfactory except Maw's moleskin plaster, manufactured in London. In applying the first dressing after the operation it is well to pad the ankle with cotton most perfectly, also the popliteal space, for the dressing may not be removed for some time, even for months.

It is regarded as an important point in the dressing to partially close the femoral artery, and this is best accomplished by means of a piece of soft sponge two or three inches in length, and perhaps as thick as two fingers, placed immediately over the artery in its lower

third, and engaged in the bandage as it passes up the limb.

In breaking up the adhesions and restoring motion to the joint, it is regarded as important to break them up most thoroughly at once. Do not hesitate to restore to the joint all the motion you may expect it will have after it has got well, when the tendons are first cut and the limb placed in a straight position. Then keep it perfectly still, past the time at which the inflammation is apt to occur.

The wound is usually dressed at first with a carbolic dressing of some kind; salve, oil, or lint wet in a solution. The first dressing is not usually removed within a week or ten days. The wound must heal from the bottom. When the limb is placed in the splint, compression should be applied to the joint by means of adhesive plaster, applied in strips, uniformly and smoothly, after the manner of strapping. This is done for the purpose of *promoting* absorption of the infiltration which has taken place into all the tissues about the joint. Extension is employed for the purpose of *preventing* absorption of the articular facets of the bone, which will occur if pressure is not removed.

PLEURO-PNEUMONIA.

The following history will illustrate one of the phases of pleuro-pneumonia. The patient is 32 years of age, laborer, single, and a German. He has been sick two weeks. The first symptom was a chill, which was followed by fever. Upon admission into the hospital the patient was suffering from great dyspnœa. Pulse, 148; resp., 56; temp., 102°. Tr. aconite, ℥i., and carbonate of ammonia, grs. v., were administered every three hours. Diet, nourishing. Next morning after admission, was better. The peculiar feature of this case was that as the *pneumonia subsided the pleurisy accompanying it increased.* This particular turn in pneumonia occurs only rarely, and the evidences of this change are chiefly physical. The patient had had dulness upon percussion, bronchial breathing, broncophony, and the characteristic expectoration, which makes out a clear case of pneumonia. The pain (he says he had stitches in his side) and friction sound make out the pleurisy, and all these signs coexisted, except the characteristic expectoration, which appeared and disappeared as it should. The only exception to the statement that we always have breath-sounds when pneumonia is present, is when there happens to be fibrinous bronchitis present with it. This may occur perhaps once in one or two hundred cases; so that, practically speaking, it can be said there are always breath sounds present in pneumonia. They are always absent in pleurisy, and a pleurisy is almost the only thing which does give complete absence of the breath-sounds. In examining a chest in which pleurisy is present, it is well to bear in mind the fact that the bronchial breathing present in the compressed lung may be communicated, and give the impression that it is present in the lower portion of the chest, while the cavity is filled with fluid. The application of these physical tests was the only means by which it could be determined that the pneumonia had been superseded in prominence by the pleurisy. Pneumonia and pleurisy sometimes approach each other very closely, and it is sometimes a matter of unusual difficulty to make a differential diagnosis. As evidence that the pneumonia is now subsiding, it is found that the bronchial inspiration is more prominent than the bronchial expiration. As a pneumonia resolves, the bronchial expiration ceases first. Whether the recovery in this case is due to the treatment or to the natural powers of recovery is, perhaps, a question which can never be determined. He is now taking quinine grs. v., three times a day. He has been receiving this for several days.

INFLAMMATORY ECZEMA.

Inflammatory eczema in a man 66 years of age. His father died of consumption. One year ago one of his ankles was swollen, and "itched him" very much. Soon after, the other ankle was affected in the same way, but in both instances the disease soon disappeared. When admitted into the hospital his right leg was immensely swollen, and was tense and hard. The points of interest in this case are the simplicity of the treatment and the rapidity of the cure.

His was a bad case of eczema, in a bad constitution, yet received no internal remedies, nothing but ward diet, quiet in bed, the local application of bicarbonate of soda, ʒ i. to the ℥ i. It is highly important in the use of this remedy (soda) that the parts should be kept *constantly* wet with the lotion. A failure to observe this precaution will bring with it a failure to cure.

A STRONG TRIO.

In the female wards was noticed a patient who was suffering from what was thought to be a gastric ulcer, well-marked epilepsy, and had also just been cured of Pott's disease. The disease of the spine had been cured by apparatus used at the hospital for cripples, and all that could be seen remaining was a little knuckle in the dorsal region, about one-fourth of an inch in elevation. The epilepsy has received a variety of treatment, without marked benefit. The chief feature in the case at present is what is supposed to be a gastric ulcer. The patient is being sustained by injections of eggs, beaten up with milk, and beef-tea. She has vomited blood and coffee-ground material, which usually indicates one of two things: either cancer of the pylorus or gastric ulcer situated in that region. With cancer a tumor is almost always present; but the absence of a tumor does not necessarily exclude the presence of cancer. Ulcers in other parts of the stomach do not necessarily produce vomiting. Cancer may or may not produce vomiting, and patients with either cancer or ulcer may occasionally vomit blood without vomiting food. The administration of cream is regarded as a very important element in the treatment of ulcers of mucous membranes. It is believed that it is one of the articles of food which do most towards healing ulcers of mucous membranes. This patient took ʒ iv. of whiskey per day for some time while under treatment for Pott's disease, and this was followed by the use of ale.

ACID DYSPEPSIA.

For the relief of this form of dyspepsia, evidenced by acid eructations after eating, an acid is administered as follows: Nitro-muriatic acid dil., gtts. v., t. i. d. *before* meals.

The *modus operandi* of the remedy administered in this manner, and in connection with this condition in digestion, is said to be this: The reason why acid eructations occur is because there is not sufficient gastric juice secreted to completely digest the food, hence acid is generated as a consequence of the process of fermentation. The administration of the mineral acid *before* meals stimulates the gastric tubules to the secretion of a larger quantity of gastric juice, and in that way secures the complete digestion of the food. A goodly number of cases have yielded to this treatment that have defied all other plans employed. In cases of pyrosis the same remedy is administered; but in that

condition it is to be administered *after* meals. Water-brash consists in the vomiting of pure mucus with an insipid fluid. According to *Frerichs* this fluid is usually *alkaline*, always contains the sulphurets, and treated with an excess of alcohol yields a precipitate which has the power of rapidly converting starch into sugar. Such a fluid cannot be formed in the stomach, and is doubtless the product of the salivary glands. The administration of the mineral acid corrects its alkalinity.

FLUCTUATIONS IN TEMPERATURE.

A case illustrating one phase of fluctuation in temperature was admitted into the hospital with rapid pulse, hot skin, high temperature, considerable nausea, and slight vomiting. Diagnosis reserved. May 3d, 11.30 P.M., her pulse was 88; resp., 28; temp., 98°.

May 4th, 8 A.M., P., 130; R., 36; T., 106½°. 11. 0 A.M., P. 126; R., 36; T., 104⅘°. 6 P.M., P., 76; R., 32; T., 100°, and from this date forward her temperature fluctuated between 98° and 100°. Physical examination at the time of this sudden rise and fall in temperature was negative. Urine, 1026; no casts or albumen. Diagnosis obscure after many days.

"In children," says Wunderlich, "the temperature in disease is extremely mobile and sensitive; its extremes greater. Women resemble children in this respect; their temperature springs up or down without apparent causes, and this mobility is also found in nervous men."

This was doubtless a case illustrating sudden elevation of temperature, which may occur as a purely nervous phenomenon.

SILICATE OF SODA.

This article is now being somewhat used in the treatment of fractures. It is employed in the same manner as plaster-of-Paris, and when associated with the metallic strips, or wire strips, already mentioned, it furnishes an elegant and efficient surgical dressing. One advantage which it possesses over plaster-of-Paris is, that it is very much lighter and equally efficient.

HYPODERMIC INJECTIONS OF WHISKEY.

These injections have been used in this hospital somewhat, particularly in those cases which required the immediate influence of stimulants. Thus far no unpleasant results have been experienced in the way of abscesses or other disagreeable symptoms. Dr. McBride, House-Physician of the New York Dispensary, reports that by the administration of 30 drops of whiskey hypodermically, an effect will be produced equal to about three or four good "drinks." It has been suggested that its administration in this manner would be a matter of economy to the habitual "toddy-drinker." It may prove a valuable suggestion to administer the remedy in this manner in certain conditions.

PTYALISM.

The day of measuring the benefit attending the administration of mercury by the amount of salivary fluid poured out has passed. Salivation is believed to be entirely unnecessary, beyond slightly affecting of the gums necessary in the treatment of syphilis. Still, strange as it may seem, there are doctors at the present day who advise and practise salivation. A patient was in the hospital who had been purposely salivated previous to his admission, and at the time of his admission was in a deplorable condition. Soothing local applications and the administration of iodide of potassium are the means ordinarily employed for the elimination and treatment of local manifestations of the poison.

PHTHISIS.

The symptomatic treatment of pulmonary consumption in many cases, if not a majority, makes up the chief management of these patients. There has been a conviction in the profession that distilled spirits, or beer and ale, was, to a certain extent, a prophylactic in relation to pulmonary consumption. It is proven, however, that the hard drinker is *more* apt to get consumption. This is in accordance with the experience of some of our best observers.

With regard to the use of alcohol as a remedy in the treatment of the disease: if the alcoholic liquors will not prevent the occurrence of the disease, it would be hardly supposed that they could do much towards cure, unless they have some specific purpose to perform. By many eminent observers it is not believed that they have any such specific effect. They are not administered in this hospital as an element of the continued constitutional treatment which all the patients receive.

It is believed to be as well to fight the battle upon the ground of regimen, diet, and perhaps some medication, as upon any yet devised. Frictions to the surface of the body, generous diet, fresh air, moderate exercise, cheerful employment, moderate counter-irritation, supporting constitutional treatment, will save a very fair proportion of the cases, at least one-half, and perhaps two-thirds. Some men, whose experience has been, and continues to be, extensive, rely almost exclusively upon regimen. It has been thought that syphilis occasionally predisposes the system to consumption, especially where the disease has been treated with mercury. That this tendency is due rather to the influence of the mercury than to the syphilis, is proven by the fact that if the mercury is withdrawn in these cases, and the patients are placed upon a proper regimen, many of them get well. In the treatment, therefore, it is always proper, if mercurials are used, that they should be used with an eye to the fact that the patient is in danger of having phthisis developed under their influence.

HÆMOPTYSIS.

Almost always, sooner or later, patients suffering from phthisis spit some blood, and sometimes the hemorrhage is profuse and dangerous. There is an opinion prevailing in the minds of the people, and shared in to some extent by the profession, that hemorrhage from the lungs is an immediately serious and alarming accident. As it occurs in the greater number of cases, however, it is believed that it does no harm, but that it acts rather to relieve some local congestion, and leaves the lungs in a better state than it found them. The average cases of hemorrhage from the lungs do not seem to hasten a fatal result. The patients, perhaps, do not do better on account of the hemorrhage, but they do not do worse. This is a grain of consolation for the patients just at the time of their greatest alarm. Again, it is not absolutely true that every person who has hemorrhage from the lungs has pulmonary consumption. Violent acute bronchitis, cancer of the lung, and mechanical congestion of the lung produced by regurgitation at the mitral valve, may be attended with hæmoptysis. Profuse hemorrhage, however, it is said, does not occur in connection with the congestion dependent upon the heart-disease. But aside from these instances, hemorrhage from the lungs is regarded by some as almost

sure evidence of phthisis. In some cases where the disease affects the central portion of the apices of the lungs, and is surrounded by healthy lung-tissue, it requires close attention in the application of physical signs to recognize the diseased spot, but that it has begun in one form or another is regarded as quite certain.

℔ There was another case in the hospital calling to mind a certain point which at one time was regarded of considerable importance. The patient had had intermittent fever, and the influence which intermittent fever may exert upon phthisis was the question suggested. About forty years ago a French observer expressed the opinion that a patient who had had intermittent fever was, to a certain extent, protected from consumption. This opinion has also received plebeian support and professional sanction, and is not infrequently expressed at the present time. By many "the shakes" are regarded as the best prophylactic remedy which can be taken. But later observations have shown that in countries where intermittent fever prevails extensively (particularly observed in Holland), the people are more liable to phthisis.

Some have regarded the hectic fever of phthisis as being only a milder type of intermittent, but it is now regarded that this opinion has no foundation in fact, although the administration of quinine is the most beneficial plan of treatment. When fever is present in phthisis there is generally increased cough and expectoration.

PAIN IN PHTHISIS.

The lungs are scarcely susceptible of pain. Phthisis is almost sure in its progress to develop chronic pleurisy, which will produce pretty firm adhesions of the lung to the wall of the chest; but this chronic pleurisy is quite apt to be painless. It is thought that it is only in exceptional cases, where the pleuritic complication is more acute than ordinary, that the pleurisy accounts for the pain. In a great majority of cases, as held by some, the pain in the chest, referred to the lungs by the patient, is the result of a certain degree of weakness which develops itself in the muscles. The patients have to exert more than the usual amount of muscular force, and this is apt to be attended by pain. If the pain is pleuritic, moderate counter-irritation is serviceable in the form of flying blisters, tinc. iodine, etc., while for the muscular pains hand-friction, and this may be conjoined with some slightly stimulating and anodyne application, will afford considerable relief.

APHONIA IN PHTHISIS.

Aphonia may be hysterical; it may depend upon chronic laryngitis, and is usually dependent upon laryngitis when it appears in connection with a case of phthisis.

The opinion has been expressed by some observers that the hoarseness and aphonia of phthisis is very apt indeed to be connected with, if not indicative of, fibrinous phthisis. The old supposition that it depended upon the presence of tuberculous deposit in the vocal cords has not borne the test of recent observations, and it is now unsafe to assume that such is the pathological condition. Counter-irritation, the atomizer, and local applications by means of the laryngoscope, are the most efficient means of treating this complication.

GRAFTING.

I will describe the method of setting grafts adopted by Dr. Van Wagenen, of Bellevue Hospital. The Dr. has taken a great interest in this subject, having set over 2,000 grafts. The plan which he now follows, after trying all the plans of which he could find any account, is this: Take up a good thick fold of skin, and from a smooth portion of this fold shave a piece of skin, embracing in its thickness a few cells of the true skin, and somewhat variable in length and breadth. A good size is three-fourths of an inch in length and three-eighths of an inch in breadth.

The ulcerated surface to which they are to be applied must have the shining glue-like appearance removed from the granulations by careful wiping before the grafts are set. The grafts are then set about one inch from the peripheral edge of the ulcer, at intervals of one-half or three-quarters of an inch, forming a complete circle. As soon as set they are dressed with lint smeared with simple cerate, and over this a roller is applied. This dressing is to be removed the *next day* after the grafts are set, and be renewed every day. After the second or third day the ordinary strapping can be resorted to, and where the space between the circle of grafts and the peripheral edge of the ulcer becomes closed, another circle of grafts may be set, and so on until complete cicatrization has been secured. If these rules are strictly adhered to, scarcely a graft is lost, the firmness and rapidity with which they adhere to the granulations sometimes being extremely marked.

SEVERE LACERATED WOUND.

It not infrequently happens that the presence or absence of arterial pulsation in a limb at some point upon the distal side, in cases of severe laceration of the soft parts, is regarded as evidence of the presence or absence of an arterial supply for the limb through the torn portion. If pulsation is present, the limb may possibly not be sacrificed by an operation. If pulsation is absent, the limb, now failing to receive its vascular supply, is nominally a dead member, and amputation should be performed. This is not reliable, for arterial pulsation at a point distant from the point of laceration may be absent for 24, 36, or 48 hours immediately after the receipt of the injury, then be restored, and go on in a normal manner.

This delay in return of pulsation will often occur after general reaction has been established. Absence of pulsation should not, therefore, be received as evidence unequivocal that the avenues for vascular supply are permanently cut off.

CONVULSIONS IN BRIGHT'S DISEASE.

Whether these convulsions are dependent upon uræmia or not is a mooted point.

They are generally known, however, as uræmic convulsions. When they come, hypodermic injections of morphine have been employed of late to control them. One patient died last night who had these convulsions, but they were controlled by this means without detriment.

In puerperal convulsions the same remedy has been used, but in these cases, thus far, it has been used more as supplementary to chloroform than independently. The first onset of the convulsions was checked by the chloroform, and, indeed, the control continued for two or three hours, and then the use of morphine hypodermically served a most satisfactory purpose, and it was thought with much more safety to the mother and child than the further continuance of chloroform. The continuance of chloroform for six, eight, or ten hours, or even longer, is thought almost certainly to prove fatal to the child and jeopardize

the life of the mother. Magendie's solution of morphia is used hypodermically in doses varying from ℥ x. to ℥ xx., and repeated p. r. n.

Progress of Medical Science.

Fracture of the Clavicle treated by placing the Arm behind the Back.—M. Broca recently treated a case of fracture of the left clavicle, in which the fracture was near the middle of the bone; was oblique, from above downwards and from without inwards, the fragments riding one another considerably. After numerous plans of treatment had failed to reduce the fragments, M. Broca adopted a suggestion made last year by Dr. Michel to the Société de Chir., and placed the arm in a semiflexed position behind the back, where it was retained by a bandage for eighteen days, with the effect of completely adjusting the fractured surfaces and producing an excellent cure. For a few days longer a sling was used. The patient, a man of considerable nerve, complained of the inconvenience and pain of the method for only the first twenty-four hours.—*Jour. de Méd.*

Poisoning from Aniline Red containing Arsenic.—Dr. Jäderholm has published the following interesting cases of arsenic poisoning, occurring in a family in Malmö, Sweden:—

The family consisted of the father, mother, and three sons. The attending physician suspected poisoning, from the symptoms, but was at first unable to detect the source. It was finally ascertained that the mother had been dyeing yarn with aniline red in a saucepan, and that, without properly cleansing the vessel, she had used it for cooking potatoes. These potatoes were eaten by the family at supper, though it was noticed that they were quite red. Soon after this meal the symptoms of poisoning showed themselves. Some of the aniline red was analyzed and found to contain 6 per cent. of arsenious acid. Arsenic was also found in the stained potatoes.

Two of the children died within 48 hours, the other on the 6th day. A post-mortem examination was made. In addition to the usual inflammatory appearances of the abdominal organs, the upper surface of the liver was found in all three cases to be marked by numerous light yellow spots of various sizes, extending a short distance into the parenchyma of the organ and indicating fatty degeneration.—*Hygeia*, 6, 1873.

Valvular Diseases of the Heart.—In a paper on "Prognosis of Valvular Diseases of the Heart," published in *Saint Thomas' Hospital Reports*, Vol. 2d, by Thomas B. Peacock, M. D., F. R. C. P., the following observations are made: In reviewing what has been said as to the sources of danger in different forms of valvular disease, it will be seen that incompetency of the valves is regarded as a more serious defect than obstruction; and of the affections of the valves of the left side of the heart, incompetency of the aortic is more dangerous than the similar condition of the mitral valves. Not only does incompetency of the aortic valves occasion great impediment to the circulation, and especially an imperfect supply of blood to the brain, but as the power of the left ventricle becomes rapidly exhausted, there is danger at any moment of death by syncope. In the corresponding condition of the mitral valves, though it seriously obstructs the pulmonic circulation and occasions great visceral congestion, death is brought about more slowly as the result of the imperfect aeration of the blood and its impure condition from the state of the parenchymatous viscera, and by dropsical effusions, as sudden death is less likely to occur. As regards obstructive disease of the two sets of valves, he would reverse the order in which they are regarded as serious, obstructive disease of the mitral being apparently a more important defect than the same affection of the aortic valves. In the former condition the combined power of the left auricle and right ventricle is unable adequately to propel the blood through the left auriculo-ventricular aperture, and hence the lungs and other organs soon become very greatly engorged; while in cases of aortic constriction the left ventricle long resists the impediment, and it is only when the obstruction has become extreme, and the power of the ventricle is impaired, that the more distant organs are involved.

Dipsomania.—The letter of Dr. George Fielding Blandford, Lecturer on Psychological Medicine in St. George's Hospital, London, published in *The Journal of Psychological Medicine* for October, 1872, gives a portion of Dr. Skae's remarks on dipsomania: He would strongly urge the clear and certain diagnosis which exists between the dipsomaniac and the self-indulgent drunkard. In the former case a disease of the nervous system is present, often hereditary and displaying itself in fits of disorder; these paroxysms are preceded by general perturbation of the system. The patient is sleepless, ill at ease; he has a perspiring skin; a quick, soft pulse, and experiences a feeling of nervous prostration so great that he is driven to the use of stimulants for relief from his suffering. In the intervals such a man very frequently abhors the very sight and smell of strong drink; he is, while his disorder is in abeyance, amiable and exemplary in the discharge of his duties, and frequently possessed of mental endowments of a high order. How different is the condition of the sot who drinks for the sake of drinking, and the pleasure he derives from the gratification of his appetite! The habitual drunkard is never exemplary in the discharge of his obligations; he does not drink in insane paroxysms, followed by bitter repentance, but quietly makes up his mind that drunkenness is happiness, and indulges his vice for the pleasure he experiences in doing so. He remarks that, when treated on the "let alone" system, cases of dipsomania invariably grow worse; the constitutional force becomes impaired, and as the bodily health gives way the mental powers deteriorate. On the contrary, when the dipsomaniacal patient is subjected to restraint and proper care, he in many instances entirely recovers from his disease, and is enabled again to take his place in the commonwealth.

Magnesia as a Surgical Dressing.—The interest which attaches to the use of dry earth as a surgical dressing in connection with the recent paper by Addinell Hewson and Conner, on this subject, has induced Dr. Ohlmeyer of Weissenburg to record his experiences in the use of the carbonate of magnesia in somewhat similar cases. He has found it of value—

1. In atonic ulcers.

2. In cases where the epidermis was eroded and the subjacent tissues were the seat of pain, and were prone to subsequent suppuration.

3. In relieving the pain of inflamed wounds.

4. In cases where it was desirous to stimulate the affected surface, prevent the access of air, and limit the formation of pus. He was led, in the first instance, to try this remedy, from its well-known action in those states of the stomach where there is an excessive formation of acids. These latter uniting with the base, magnesia, are neutralized, and carbonic

acid evolved. Accordingly he believes that in exposed surfaces where the process of healing is prevented by fermentative action, this dressing is indicated. The use of it was attended with satisfactory results. The magnesia unites with the acids which form on the surface; it excludes the oxygen, forms an artificial covering, irritates the granulations, and forms a barrier against external and harmful agents.

In preparing the application he selects a fluid that will not readily oxidize. Oil answers this indication, and the kind he employs is the oil of sweet almonds. Adding to this the carbonate, he makes a tolerably fluid paste or salve. This is then spread upon linen and laid over the wound. It is held in place in the ordinary way.

Dr. Ohlmeyer also adds that he has used the carbonate successfully in facial erysipelas, when it was important to protect other patients from infection. In this latter case he used water as a substitute for oil.—*Allg. Med. Central-Zeit.*, 47, 1873.

New Method of Healing Chronic Ulcers.—Nussbaum, of Munich, has just published the results of a new operation which he has now performed in sixty cases of old extensive chronic ulcers that had defied all ordinary treatment. His plan was as follows:—

He narcotized the patient, and then made a deep incision entirely round the ulcer and about one inch from its edge. The depth of the cut, which extended to the fascia, was so great that a copious hemorrhage followed, but was arrested by small strips of lint pressed into the open wound. On the next day the dressings were removed, and the whole covered with lint kept wet in water. This same dressing was continued until the healing was well advanced. He observes that the changes which ensued during the first twenty-four hours were very remarkable. In one case, an ulcer that had furnished daily three or four quarts of a thin, filthy, and offensive discharge, gave only about a teaspoonful of a thick, white, and inodorous pus on the day after the operation. The cut, too, in all cases, began to gape open on the second day, and the circumference of the ulcer was now encroached upon by the liberated tissues, so that an immediate diminution in size of the ulcer was accomplished. With each day the ulcer continued to diminish in size, while the wounds produced by the incision increased. When the process of healing in the old ulcer was complete, the artificial ulcer was broad and hoop-shaped.

The last step in the treatment consisted in applying straps and bandages in the ordinary way.

The *rationale* of his method is simply that the incision severs large numbers of dilated vessels that have furnished the ulcer with nourishment. The only source of supply left is the diminutive vessels which reach the surface from beneath. The material supplied by them is small in amount, and has time to undergo change into formative cells and connective tissue without being cast off at a too early stage by a new layer of exudation pressing it from behind; for wherever we have thick, creamy, and white or laudable pus, there we have new formations going on, accompanied by the development of connective tissues and the formation of young vessels, as in every healthy sore. It is not claimed that this method will insure the patient against a relapse; but that the interval will at any rate be longer, and the time occupied in effecting a cure much shorter, than under the usual plans of treatment.

In cases where the loss of blood attendant on the operation would be a contra-indication, the author transplants skin-flaps. Such ulcers are usually upon the leg, and the affected limb is obviously unable to furnish the material. He therefore binds the legs firmly together, and dissects up from the sound one a sufficient flap for his purpose. This he leaves attached by the edge, and carries it over to the surface of the ulcer, so that a bridge is formed. The edges of the ulcer are then freshened, and the flap sewed on its place. Two difficulties, however, are met with which are a great source of embarrassment.

In the first place, the flap shrinks; and in the second, the ulcer grows larger when the edges are freshened. For example, an ulcer measuring eight inches square, is to be covered in the manner described. If a flap of the same size be removed, it will be found to have shrunk to five inches square; and if the edges of the ulcer be freshened, it will be found to measure twelve inches square. So that instead of the proportion of eight to eight being preserved, we shall have five to twelve. To obviate this serious source of difficulty, Thiersch recommends that the parts to be operated on be prepared in advance by fourteen days' treatment, to make them more self-dependent, stronger, and juicier. His plan is this: He proceeds as if to remove a flap of the required size, but completes only two of the parallel incisions, and leaves the flap attached above and below; he then passes the handle of his scalpel under the centre of the flap and inserts a piece of lint. In this way the nutrition of the part is diminished, but it does not shrink, but on the contrary, becomes hypertrophied. At the moment of operation he severs one of the attachments, and then brings the flap into its proper place. When complete union has taken place, the remaining attachment is severed and the limbs are liberated.

The Effects of Tobacco Smoke.—M. Gustave Lebon, of Paris, has recently issued a treatise upon the Chemical and Pathological Effects of Tobacco Smoke upon the Human System, the author having first constructed a variety of apparatus by which he has been enabled, he states, to collect and show with exactness the various elements of smoke which condense and deposit themselves on the organs of the smoker. One hundred grammes—1.300 grs., English troy—of French tobacco furnish 0.550 grs. of nicotine and 0.490 grs. of ammonia. Tobaccos of the Levant are the least dangerous, some of them possessing but a small trace of nicotine. In small doses, he says, tobacco smoke instantaneously excites cerebral activity and the intellectual forces, and facilitates digestion. In excessive and frequently repeated doses, it produces difficulty of digestion, benumbed intelligence, and clouded memory.

Monads in the Metastatic Abscesses of Living Persons.—A striking case is published by Vogt, of Greifswald, sustaining the views held by Recklinghausen, Waldeyer, Klebs, and others, that the living organisms frequently found in the fluids of persons suffering from infectious diseases are of themselves the excitants of disease. The experiments, with the conclusions drawn, were as follows:—

1. A recent abscess of the wrist-joint in a pyæmic patient was opened, and the putrid matter, when examined microscopically, showed abundance of monads in active motion. Subsequently, both the fluid in the opposite healthy joint, which was apparently healthy, as well as the blood of the patient, were examined, and nothing more than an occasional monad was found in either of them. No bacterias were found, and the author believes, with Orth, that when they occur it is only in disorganized preparations.

2. The same experiment was performed daily until the death of the patient, which occurred five days later, and the results were uniformly the same.

THE MEDICAL RECORD:

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THE RATIONAL STUDY OF DISEASE.

THERE is nothing which gives greater evidence of progress in medicine than the results which have grown out of the present method we have of studying disease. Our positive knowledge of the laws which govern disease has been very greatly advanced by experiments in physiology and by discoveries in pathology; but the aids thus afforded have not had that bearing upon the prognosis and treatment which plausible theories and apparently legitimate deductions led us to expect.

We cannot get a better appreciation of our present stand-point than by comparison of the results of the experiences of the past twenty-five or thirty years. It may be claimed that we have not made any marked advances in the therapeutics of disease during this period. This assertion has a foundation in truth, if we assume that the patient's treatment is measured by the amount and variety of medicines taken. We have learned to give very little medicine, but we claim this to be the legitimate result of a more thorough study of the laws of disease, and a better appreciation of the significance of symptoms.

During the period named, the tangible results of progress have been seen in the departments of pathology and diagnosis. If we look at the subject in a somewhat different aspect from what it is generally viewed, we shall find that pathology, with its great claim to positivism, and diagnosis, with its nicely drawn distinctions, while it has advanced us in some directions, has misled us in others. When pathology, with the aid of the microscope, taught its lessons a quarter of a century ago, and when diagnosis, with the stethoscope, the ophthalmoscope, and all the instrumental appliances now so well known to all, laid down rules for every imaginary emergency, it seemed as if the science of medicine would soon become an exact one. Experience has, however, taught us many a lesson since, and proved the futility of pinning our faith to theories. The truth is now apparent that we expected too much of pathology; that our prognosis and treatment, based upon purely pathological notions, was far from being absolutely correct; that we have had to supplement such knowledge with the study of disease *per se*.

When the microscope came into use, and this is within the recollection of very many of us, there were no bounds to the expectations of those who were able to use the instrument. Everything was then examined by the microscope, and nothing was considered complete in the history of the case if a microscopical examination of some sort or other had not been made. The certainty with which cancer could be diagnosticated was a matter particularly dwelt upon, and early in the history of microscopical examination we find the pathognomonic cancer-cell figuring quite conspicuously. We should not like to say how many hundreds of tumors were doomed to extirpation on account of the presence of this cell, and how many unfavorable prognoses were given to the poor patients who during the first furor of microscopical examinations were unfortunate enough to have any extra growths about their bodies.

We knew of one gentleman in this city who was one of the first to use the microscope for pathological research, who found cancer in every growth that was brought him. There was, in fact, either an epidemic of cancer for his especial benefit, or the microscope failed to show him anything else. His aptitude in finding these kind of cells became a standard joke among his friends until they discovered to their chagrin that every piece of meat they could obtain from their butcher's stall was afflicted with the disease. And, after all, the difficulty was not so much due to the poor microscope, as it was to the wrong use of the brains at the end of the cylinder.

We give every credit to the microscope for its research, but its fault has been that from the start it has striven to prove too much, to revolve every theory of disease, every prognostication of a result, upon the centre of some cell, and if, perchance, by a continuance of the investigations in this line the cell split, so much wider field there opened for microscopy.

It is needless to say that very many ludicrous mistakes were made in those days by the best microscopists. Every one who has used the instrument for the past fifteen years can bear us out in the statement, that there are many patients still living who ought to have died long ago with cancer and Bright's kidney. We have made such mistakes, and have done it under the full support of the then accepted law of microscopic pathology, and the physician who has not, either did not have an instrument at that time, or his opinion was never asked, or his solemn verdict never recorded.

The microscope, like every other useful instrument, is beginning to find its place in the study of disease. Instead of being the ultimatum in the diagnosis and prognosis, it is merely an aid. The manner of studying microscopic growths has entirely changed from what it once was. Instead of deciding upon a single cell that was scraped from the surface of a tumor, or contained in the so-called cancer-juice, we make sections of tumors; the significance of cells is lost in the study of the relations which these cells hold to the surrounding tissues, the arrangement of the alveoli, and, more than all, the clinical history of the growth itself. Tumors which were considered cancerous fifteen and twenty years ago have now another name—are divided up into classes more in accordance with their clinical history; and the careful observer is not apt to be so positive as heretofore in regard to the absolute certainty of the return of a particular kind of growth.

What is true of microscopy is true of every other department of investigation which in times gone by was considered positive. Positivism has reacted into conservatism, and conservatism finds it a safer plan in making a prognosis or in settling upon a rational plan of treatment to base an opinion upon the results of the study of disease as a whole. It is in this respect that we have made great progress. We are led to respect every means of investigation, but we are inclined to group the evidence rather than pin our faith upon a single microscopical cell, a particular pitch in the respiratory murmur, or a few casts in the urine. We have discovered that it is necessary to take many other circumstances into account, and, while giving each its relative significant value, to found our opinions upon a general clinical study of a particular case.

The signs of the times are already manifest in the different departments of medicine and surgery. By this study of disease in a general way we are beginning to show an antagonism against some of the positive doctrines of pathology. Take, for instance, Bright's disease of the kidneys. Experience has shown us that patients with casts in their urine live on in spite of us. So striking is this fact to many observers that not a few have boldly asserted that we shall have to unlearn much that we have already learned in regard to the prognosis of these affections. Others, with equal experience, say that we have been placing too much confidence upon urinary examinations in our prognoses; that the real significance of fibrinous casts is not yet appreciated. It will be recollected that in a recent number of THE RECORD a surgeon of this city was bold enough to operate upon a patient with waxy kidney, in the belief that the operation would remove the cause of the renal difficulty, and at last accounts the patient was doing well. Not long ago the existence of a waxy kidney was considered the best reason why no operation should be performed.

How is it in cases of heart disease? We discover that, despite our former notions in regard to the fatality of this affection, very many cases of hypertrophy and valvular lesion live to a good old age and generally die of some other affection. We might go on with the enumeration of similar diseases thought to be absolutely fatal in times gone by, but we imagine we have said enough to prove that the investigation of disease is beginning to take a more rational turn; that disease as such is being more and more studied from a purely clinical point of view. This tendency of study has a very healthful influence upon our therapeutics of disease and our prognosis of results. We are beginning to be more cautious in the expression of our opinions in reference to both of them, at the same time we are stimulated to think and act more as philosophers than as hobbyists.

We were accustomed to smile pityingly when our patients preferred their old doctor because he understood the constitution of their family. Now we are beginning to see that there is more in this than a mere notion. We are appreciating what modification particular constitutions have upon the prognosis and treatment of particular disease; in other words, we find it interesting to study that element in our cases spoken of as an individual tolerance of disease. We were pleased to hear at a recent meeting of the County Society a paper upon this subject by one of the leaders of medical thought in this country, in which due importance was given to the effect which treatment and prognosis should have upon a knowledge of this fact. Many of our readers who attended lectures in this city may recollect the story of the Shaw family, so well told by one of the professors of surgery, and can see its bearing in connection with the subject of family constitution. The narrator stated that he was once called into the country to see a case of severe injury. From the account which he received it appeared that there was no chance for the poor patient—he was seemingly crushed to pieces. On his way thither the surgeon was asked his destination. The answer being given, the inquisitive rustic significantly said, "He is a Shaw! Well, I don't care how bad he's hurt, you can't kill any of them. For you see that family have got the constitution to stand it."

Not only do we pay attention to the modifying influences of family history, but we are studying diseases in still broader relations; we are acquainting ourselves more thoroughly with climatic influences, the laws of communities, social surroundings, meteoric and atmospheric changes; in fact we are developing a taste for the study of disease in all its phases and in all its intricate relations to circumstance and individual.

We can see in this a tendency to liberal ideas of treatment, to a settled antagonism against one-ideaism. The day for the man with one remedy has gone by. If the enthusiast for a particular plan of treatment wishes his advice to be heeded, his opinions respected, he must not insult the judgment of his professional

brethren by ignoring the existence of the grand principles in the management of disease which have now become the accepted canons of the church medical.

We say that the present rational system of studying disease is a healthful sign of progress, and tends to give to each method of investigation its due and relative importance, neglecting nothing and making use of everything which has a tendency to make us discriminating and intelligent practitioners in the widest sense of the term.

THE YELLOW FEVER IN THE SOUTH-WEST.

THE reports from the yellow-fever districts of the South-west are very encouraging. The number of cases are steadily decreasing, and the death-rate is growing less and less, day by day. On the eve of the battle with this dreadful scourge, we might refer to the many heroic and life-sacrificing deeds of the brethren of our profession in those districts, but this is not necessary. Every one expected that such a record would necessarily have to be made, and no one has been disappointed in such expectations. Our greatest pride has always been to relieve needy suffering, and it would be strange indeed if we neglected such golden opportunities for gratifying it. The thanks of humanity are also due to the noble labor of the clergymen, and the Christ-like efforts of the various benevolent associations. "Inasmuch as ye have done it unto the least of these my brethren, ye have done it unto me."

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Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, September 10, 1873.

DR. T. C. FINNELL, Chairman *pro tem.*

AMYLOID DEGENERATION OF CHOROID WITH INTRA-OCULAR HEMORRHAGE.

DR. H. KNAPP remarked that the specimen of amyloid degeneration of the eye, with intra-ocular hemorrhage, presented at the meeting of the Society last June, had been more carefully examined, as was also the case with the condition of the patient. In consequence of said examination he was ready to substantiate the assertion that the disease in the eye was limited to that organ alone, and further, that the degeneration was confined to the arteries of the choroid. He was not aware that there had been a record of any similar case.

IRIDO-CHOROIDITIS—AN INTERESTING POINT IN DIAGNOSIS.

Dr. K. next presented an eye which he had removed that afternoon, and gave the following history: The patient, aged thirty, had lost his right eye when a child. The organ seemed to have shrunken from the beginning, but kept quiet until three months ago, when

it became inflamed, reflecting irritation to the opposite eye. The latter eye, although found healthy, showed great derangement in its function. The damaged eye proved on examination to be the subject of irido-choroiditis, with ossification of the choroid, hence its removal. In a clinical point of view the specimen was of much interest as proving the certainty of diagnosing ossified choroid by the touch. This was done by simply pressing the moistened finger upon the outer and posterior aspect of the ball and discovering the sharp anterior edge of the bony zone situated just posterior to the ciliary body. This clinical fact was very satisfactorily demonstrated on the specimen as exhibited to the Society.

SPINDLE-CELL SARCOMA OF IRIS.

He exhibited a second specimen, consisting of tumors of the iris, which had been presented at a previous meeting, but which at the time was unaccompanied with a complete microscopical examination. Since that meeting he had had an opportunity of making such an examination, and wished to report the results. The tumors were found to be situated in and upon the anterior layer of the iris, the larger upon the superior portion, the size of a small pea, the others on the inferior portion, the size of millet seeds. The large tumor encroached upon the middle layer of the iris, but all presented the same microscopical characteristics, viz., those which belonged to spindle-celled sarcoma. He remarked that he had only seen another tumor of the sort in that locality on record. The specimens were exhibited under the microscope for the inspection of the members.

CHRONIC INFLAMMATION OF ANKLE-JOINT.

Dr. Sayre presented the lower portion of the leg, with ankle-joint, removed by amputation from a negro two weeks before at Healing Spring, Va. The man was a patient of Dr. Gilmore, of that place. Two years before he had sprained his ankle while porter of the hotel. He was able to do his work during that summer, but the following winter the ankle became very painful, which obliged him to keep quiet. During the greater part of the past year he had been confined to his cabin, an apartment only twelve feet square. When seen by Dr. S. the ankle was enormously swollen, puffy, and contained four or five fistulæ communicating with the joint, and from which unhealthy pus was discharged. His constitution had suffered very much in consequence, so much so that he was considered by his medical attendant almost past recovery. The limb was amputated, giving the patient the "poor man's leg," and at last account the wound had healed kindly, and for the most part by first intention.

On opening the joint the whole surface was denuded of synovial membrane and cartilage, and presented the peculiar red appearance common to chronic inflammatory disease, the result of local injury. At the posterior surface the articulating surface of the astragalus was necrosed, but in other portions of the joint there were evidences in the shape of granulations of the attempt on the part of nature to repair the mischief. The specimens, as had many others which Dr. S. had had the opportunity of exhibiting, proved that these troubles in the joint were of traumatic and not of scrofulous origin. In similar cases, but in those in which patients were surrounded with proper conveniences, he had made it a practice to open the joints, giving exit to the pent-up pus, gouging out the dead bone, and establishing free drainage. The treatment had been followed with such success that he had adopted it to the exclusion of other means.

Stated Meeting, Sept. 24, 1873.

Dr. E. L. Keyes, Vice-President, in the Chair.

STOMACH FILLED WITH FÆCAL FLUID, AND NO SATISFACTORY EXPLANATION.

Dr. R. E. Van Geison presented a stomach, with the following history:—

M., aet. 55, had suffered for years from severe indigestion, abdominal pains, eructations, occasional vomiting, loss of appetite, etc. Last spring symptoms increased, he grew more and more emaciated, when occasional fever and chills set in, which were controlled with full doses of quinine after a few weeks.

Aug. 7th, symptoms of retention of urine and pain in rectum set in, followed by complete retention, which lasted for over a week. Suddenly, after a gush of pus from the bladder, all these local symptoms ceased.

Diagnosis.—Abscess of prostate from low state of system, there being no obstruction of urethra whatever.

After this his digestion improved a little until Sept. 14th, when diarrhœa troubled him. Sept. 17th, he complained of severe pain in right side of chest. Evening of Sept. 18th, stercoraceous vomiting set in, the bowels still acting until death from exhaustion at 4 P.M., Sept. 20th.

Post-mortem.—Held Sept. 21st, 19 hours after death. On opening abdomen nothing could be seen excepting the stomach, and a very small loop of small intestines on the left side. The stomach fills the whole abdomen, and is full of fæcal fluid. It measures more than 15 inches in length. Small intestines found, on raising the stomach, entirely collapsed. Liver and kidneys normal. Intestines near sigmoid flexure thick and congested; near transverse colon, appearance of beginning ulceration in two or three parts. Intestines carefully examined revealed no perforation, as was expected. The prostate gland was normal in size.

LITHOTOMY FOLLOWED BY SLOUGH, PERFORATION OF THE RECTUM, AND URETHRO-ANAL FISTULA.

Dr. C. K. Briddon presented a specimen of stone, with the following remarks: I have here the fragments of a single calculus of unusually large dimensions. The gentleman from whom it was removed was twenty-eight years old; he married at the age of twenty-five, and began to suffer from symptoms of stone three months afterwards. For a period of eighteen months he was under the charge of a man who assured him that he would dissolve his stone by medicines administered by the mouth. He then consulted a regular practitioner, who brought him to my office on the thirtieth day of May. His meatus was too small to admit a small lithotrite, which I regard as the best instrument for making such examinations, inasmuch as it enables you to measure the dimensions at the same time, and I used Sir Henry Thompson's searcher. The stone was readily detected, lying, as large stones usually do, near the neck of the bladder. From the sound on percussion I judged it to be soft, and from the impression made upon my fingers, carrying the instrument over its surface, it was considered to be large.

His urine contained one-twelfth its volume of ropy mucus. Specific gravity 1.019. Reaction acid, no deposit of albumen on application of heat and nitric acid, and on examination by the microscope presented abundance of pus corpuscles, but no casts.

Lateral operation of lithotomy was done on the 14th day of June, in the presence of Professors Chas. A. Budd, Erskine Mason, Drs. Quackenboss, John

Howe, Robt. W. Taylor, and others. The first incision was arrested by annoying expulsive efforts made by the patient to empty the contents of his rectum, which was supposed to have been emptied by a dose of oil administered on the night of the thirteenth, and an enema one hour previous to the time appointed for the operation. As soon as these muscular contractions had quieted down under more profound anæsthesia, an entrance was made into the bladder, and a finger detected a very large single calculus. It could only have been removed entire by an unwarrantable amount of traction, and it fortunately broke under the pressure of the forceps. By the finger I estimated its diameters at two and a half inches by two. It took some time to remove all the fragments by the scoop; but this was thoroughly done, and the bladder was well irrigated with tepid water.

A considerable amount of the calculus was lost in blood clot. The portion I preserved, after drying, weighed twelve drachms and thirty-four grains. Its composition was phosphatic, with uric acid nucleus, and if we recognize the fact that such concretions are very light, we may form a pretty fair estimate of its size. For several days he had considerable abdominal pain, tympanitis, and tenderness, that necessitated a pretty free use of opium; but his pulse never rose above 110, and his temperature never exceeded 100° Fahr.

On the twentieth he complained that the wound smarted and felt more sensitive than it had done. It looked well, but the discharge was offensive and contained some small shreddy sloughs. In the evening I was informed by his nurse that flatus had escaped by the wound, and as it was now the seventh day, and the bowels had not moved, I directed the parts to be inspected during the act of defecation. I supposed that sloughing and perforation of the gut had occurred from the unavoidable bruising of the wound in the extraction of the stone. There certainly was no wound of the rectum during the operation, for no escape took place for the seven days following.

21st, 6 A.M. Was summoned to his bedside and found himself and attendant alarmed by the fact that his bowels had moved, and that a part of the contents had escaped through the wound. After verifying this state of affairs, I introduced my left forefinger into the rectum, and feeling a perforation just above the sphincter, about one-sixth of an inch in diameter, I passed a blunt-pointed curved bistoury through the wound and fistulous opening, and divided the sphincter.

His bladder would now retain four or five ounces of urine, but it all passed through the wound, and being very offensive I introduced a silver catheter and injected it with carbolic acid, half a grain to the ounce.

22d. His condition, local and general, was all that could be desired, but towards evening suffered great pain from the passage of three large solid scybala. They were more like enteroliths than anything else, and I was much surprised that their expulsion was not followed by hemorrhage. To get rid of any that might remain, and to prevent the formation of any more, I directed half a tumbler of Frederickshalle every morning.

23d. It is probable that the fistulous communication between the rectum and the wound was not entirely above the internal sphincter, inasmuch as he has entire control over his evacuations.

From the last date until the fourth of July, he continued steadily to improve. Two-thirds of the contents of his bladder passed per urethram; he had no trouble with his bowels, and the wound was nearly healed. On the night of the fourth, he sat for some time in a draught between two windows, and on the following morning complained of muscular pains and headache; his temperature was increased, and his pulse was accelerated. For this condition I prescribed five grains of quinine night and morning. Febrile movement passed away, and nothing occurred until the 8th, when he had a pretty severe attack of renal colic, which lasted about two hours and did not recur.

During my absence in Canada he had an attack of retention, followed by expulsion of two small calculi. The largest was smaller than a pea, and their passage excited an attack of epididymitis, which was attended to by Dr. Mason. On my return to the city I found the patient in very good condition, and on the 28th he was attending to his duties as book-keeper in one of our leading hotels. He had complete control over his rectum; perineal wound was all healed; but there still remained a fistulous communication between the membranous urethra and the rectum, or its anal aperture. The exact position of this opening was about the superior border of the internal sphincter, one inch and a quarter from the verge of the anus. There had evidently been considerable loss of tissue. The wall of the extremity of the rectum appeared to be in close apposition with the floor of the urethra, and the length of the fistulous aperture consisted of these two walls, without the interposition of connective tissue, and measuring probably not more than two lines. Its diameter was large enough to permit the escape of at least a fourth part of the urine. The margins of this aperture were touched first with the strong tinct. of canthar. of the Pruss. Pharm., and subsequently with nitrate of silver. It was not a suitable case for the actual or galvanic cautery, which would in all probability have caused still further destruction of the thin walls that surrounded the opening. He was directed to empty his bladder with a Mercier's catheter for a month or longer. Catheterism had to be discontinued on account of the supervention of inflamed testes, which subsequently suppurated, but it is at present being carried out with better prospects of success.

I present a diagram which illustrates the position of the urethro-anal fistula.

SPECIMEN OF CANCER OF THE STOMACH.

DR. BRIDDON presented a second specimen, and said: The gentleman from whom the specimen was removed came under observation in the month of April of the present year. He was sixty-seven years old, married, and the father of a family of healthy children; no disease such as that to which he succumbed had been known in any of his ancestors. He was a man of temperate habits, had always enjoyed good health, and first complained of symptoms, which were referred to his stomach, in the month of October, eighteen hundred and seventy-two. These symptoms were regarded as functional derangements, and, in fact, when I first saw him there was absence of all the characteristics of malignant disease but anorexia and marked progressive emaciation. There was at that time no vomiting and no epigastric tumor, nor did he suffer from pain. Six weeks before his death he was annoyed by eructations and vomiting, and a tumor could be felt in the usual site. Autopsy was made about eighteen hours after death. All the abdominal viscera except the stomach were found in a healthy condition; that organ was found collapsed, and in size and form resembled a large kidney. The whole of its structure appeared to be infiltrated with the morbid deposit, which had also encroached upon the lesser omentum. Around the cardiac orifice the deposit was an inch thick, along the lesser curvature less, and at the pylorus, which was

contracted to about the diameter of the third of an inch, the thickness was about three-quarters of an inch; on the internal surface of the anterior wall was a small fungous growth about the size of a cranberry.

Correspondence.

AMMONIA AND ITS USES:

WITH MORE PARTICULAR REFERENCE TO THE SPIRITUS AMMONIÆ AROM. OF THE PHARMACOPŒIA.

To the Editor of The Medical Record.

SIR:—Ammonia in the form of the aromatic spirit is not now very frequently used, it being more customary to prescribe the carbonate. Related to this fact, and perhaps accounting for it, is another, and one of some importance.

The formula for the preparation of sp. ammon. arom. in the present Pharmacopœia is not the same as the one in former use, as that in the fifth edition for example. In this latter the spirit is directed to be *distilled* agreeably to the following formula:—

℞ Muriate of ammonia, five ounces.
Carbonate of potassa, eight ounces.
Cinnamon and cloves, of each two drachms.
Lemon peel, four ounces.
Alcohol and water, each five pints.

Mix and distil seven pints and a half.

The formula of the present Pharmacopœia is as follows:—

℞ Carbonate of ammonia, one ounce.
Water of ammonia, three fluid ounces.
Oil of lemon, two drachms and a half.
Oil of nutmeg, forty minims.
Oil of lavender, fifteen minims.
Alcohol, a pint and a half.
Water, a sufficient quantity.

Dissolve the oils in the alcohol and add to the solution of ammonias.

The superiority of the old process over the present one is both theoretically and practically certain. It is theoretically certain, because in the one case we have a fixed, determined salt of ammonia in solution; whilst in the other we have not. What we desire to have is a solution of a mono-basic carbonate, and by the old process we obtain this. But by the modern process who shall tell *what* we get?

Carbonate of ammonia is, to be sure, ordered, but this may be, judging by the specimens one sees, either a carbonate (sesquicarbonate) or a bicarbonate—more likely the latter than the former, but probably a mixture of both. Now the bicarbonate is entirely useless, if not worse than useless. Again, as is very truly remarked by the editors of the Dispensatory, "the omission to distil is a defect; for if the *volatile oils* contain impurity the preparation will be colored and turbid." But, more important than this, the medicinal effect will be more unreliable, if not positively harmful. There is still a third objection—the larger percentage of alcohol in the present process. In the old formula the water and alcohol are in equal proportions; in the new there are three parts of alcohol to only one of water.

So much for the *preparation* of the medicine. But few words will suffice in speaking of its medicinal virtues, for they are well known. If we could obtain the spirit of ammonia made according to the old form it might prove to be one of our most valuable remedies in those complaints incident to our hot summers. We are all familiar with the great fatality of cholera infantum, and of the inefficacy of all medication in a great number of cases. This being so, there is perhaps no new remedy that could be suggested, or come to us with better credentials, than the old aromatic spirit of ammonia. It would be well at any rate to give it a trial, especially where the case is passing into a state of collapse. From five to ten drops might be given every half hour in a little water. The dose and times of administration, however, would be varied according to the discretion of the physician. When the more threatening symptoms subside, the remedy would then be discontinued or given at longer intervals. As an external remedy it might also be useful by sprinkling a teaspoonful on a flannel previously wrung out of hot water and applied to the abdomen. In addition to the use of this remedy in the diseases tending to collapse, it is well known to be a valuable antispasmodic, affording relief more quickly and surely than any other.

The great desideratum is to secure the spirit prepared agreeably to the old formula.

Geo. Herring, M.D.
628 Fifth av., Brooklyn, N. Y.

THE DOUCHE IN AFFECTIONS OF THE THROAT.

To the Editor of The Medical Record.

SIR:—I desire through The Record to call the attention of the profession to a means of treating diseases of the throat that I have found useful, and which, I believe, is not generally employed.

The physician that treats largely throat affections is often asked by his patient if he himself cannot do something in the way of treatment to hasten recovery. To prescribe a gargle is usually sufficient to satisfy this desire; but every physician knows that, as usually performed, it is of almost no value, and even when most successfully accomplished its range of utility is limited to a very small field. To supply this deficit, and at the same time to put something useful and practical into the hands of my patient, I have used for several years a throat douche. The plan occurred to me after listening to a paper* read by Dr. Emmet, wherein he referred to the utility of the hot-water douche in certain uterine affections. Though I first contemplated its use only in acute inflammations, I have found its employment in chronic affections very advantageous.

To carry out this plan I have found the fountain syringe a most convenient receptacle and conductor of the fluid to be used. This being filled and placed at a convenient elevation, the patient or an assistant takes the delivery pipe, which is provided with a glass nozzle with one or more perforations, and, the head being bent far forwards, the mouth widely opened, and lungs well filled, carries it far towards the back of the mouth, and allows the fluid to flow against the different walls of the pharynx. Before expiration is permitted, the stream of fluid is shut off by compressing the rubber tubing, when the operation is again repeated, making each séance as long as the nature of the disease requires. Any fluid, medicated or not, which the physician desires to bring in thorough contact with any part of the cavity of the mouth, can be used in this way.

In a recent number† of the *Bull. Gén. de Thér.*, Dr.

* Read before the Med. Library and Journal Ass., March 10th, 1871.
† June 15, 187[illegible].

A. Cousin advocates the treatment of granular pharyngitis by a very similar principle.

In exceptional cases, when, by reflex action, the stomach is easily affected, a stream of fluid impinging against the pharynx will sometimes excite retching, but cautious perseverance will usually overcome this tendency in a very short time.

R. P. LINCOLN, M.D.

22 WEST THIRTY-FIRST STREET, Oct. 1, 1873.]

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from October 5, 1873, *to October* 18, 1873.

GHISELIN, J. T., Surgeon.—Relieved from duty in Dept. of the Columbia, and ordered to Dept. of Texas. S. O. 206, A. G. O., October 15, 1873.

MCKEE, J. C., Surgeon.—Relieved from duty in Dept. of the East, and ordered to Dept. of California. S. O. 197, A. G. O., October 6, 1873.

ALDEN, C. H., Surgeon.—Relieved from duty in Dept. of the Lakes, and ordered to the Dept. of the Columbia. S. O. 197, C. S., A. G. O.

WEBSTER, WARREN, Surgeon.—Relieved from duty in the Dept. of the East, and ordered to the Dept. of California. S. O. 197, C. S., A. G. O.

MCCLELLAN, ELY, Asst. Surgeon.—Assigned to duty at Headquarters, Dept. of the South. S. O. 174, Dept. of the South, October 8, 1873.

WATERS, W. E., Asst. Surgeon.—Granted leave of absence for 20 days. S. O. 154, Dept. of the Missouri, October 1, 1873.

HUBBARD, VAN BUREN, Asst. Surgeon.—Relieved from further duty at these Headquarters, and to join his Station at Mississippi City, Miss. S. O. 158, Dept. of the Gulf, October 4, 1873; and granted leave of absence for 30 days by Dept. Commander.

BREWER, JNO. W., Asst. Surgeon.—Granted leave of absence for 30 days. S. O. 195, Dept. of the East, October 7, 1873; and assigned to duty as Post Surgeon at Fort Independence, Boston Harbor. S. O. 197, Dept. of the East, October 9, 1873.

DE WITT, CALVIN, Asst. Surgeon.—Relieved from duty in Dept. of California, to proceed to Harrisburg, Pa., and report by letter, on arrival, to the Surgeon General. S. O. 197, C. S., A. G. O.

GIRARD, A. C., Asst. Surgeon.—Assigned to duty at McPherson B'ks, Atlanta, Ga. S. O. 174, C. S., Dept. of the South.

KIMBALL, J. P., Asst. Surgeon.—Granted leave of absence for 30 days. S. O. 224, Dept. of Dakota, October 9, 1873.

Medical Items and News.

INTENTIONAL FRACTURE OF FEMUR TO PRODUCE SHORTENING.—Those who have heard of the surgeon of this city who not long since exseeted a portion of femur from the sound thigh of a young man having shortening of the other limb, in consequence of caries of the head of the femur, and who by this means gave him limbs of equal length, will be interested to know that he has a rival in the person of Professor Rizzoli, of Bologna.

From a paper read before the Medical Society of Bologna, we learn that he has recently had a fourth successful case in which he has intentionally fractured the femur in order to produce shortening of the limb. This case was in a girl of thirteen, who had inflammation of the cotyloid cavity when one month old, and resulting dislocation of the head of the femur. At the time of the operation the limb was so short that, when standing, the great toe hardly reached the ground.

Professor Rizzoli fractured the right femur, and caused the fragments to override to an extent sufficient to equalize the length of the two limbs. Union took place in twenty days, and the patient left the bed at the end of five weeks.

HUDSON RIVER STATE HOSPITAL, N. Y.—Under the auspices of Dr. C. R. Agnew and other members of the Executive Committee of the Board of Managers, a number of prominent medical gentlemen from this city made a visit to Poughkeepsie, Saturday, October 11th, by special train, to inspect the Hospital for the Insane at that place. After a bountiful collation, the distinguished company were conducted through the institution and around the spacious grounds by the Medical Superintendent, Dr. J. M. Cleaveland. Every part of the establishment was visited, and much attention was paid to the arrangements for heat, ventilation, and the water supply. Among the distinguished medical gentlemen present, were, Drs. E. L. Beadle of Poughkeepsie, President of the Board; S. Oakley Vanderpoel, Health Officer of the Port of New York; Drs. Gurdon Buck, Abram Dubois, Meredith Clymer, D. Tilden Brown, M.D., of Bloomingdale Asylum; J. L. Vandervoort, Librarian of New York Hospital; C. M. Allin, Surgeon of New York Hospital; Jared Linsly, M.D., S. T. Hubbard, O. White, J. G. Adams, Corresponding Secretary of New York Academy of Medicine; B. W. McCready, Ellsworth Eliot, President Medical Society Co., New York; D. B. St. John Roosa, B. A. Segur, J. H. Hinton, A. L. Carroll, M.D., R. J. O'Sullivan, James M. Minor, E. R. Peaslee, Prof. T. M. Markoe, Dr. R. L. Parsons, A. N. Bell, M.D., editor of *The Sanitarian*, M. H. Macy, Dr. Buttolph of the Trenton Asylum, New Jersey, were also present, with many other gentlemen from the adjoining counties.

At the conclusion of the visit, a meeting was called and organized by the appointment of Dr. Jared Linsly, Chairman, and C. M. Allin, M.D., Secretary.

A Committee of the following named gentlemen was selected to prepare resolutions expressive of the views of those present of the condition of the Institution: B. W. McCready, M.D., Physician to Bellevue Hospital; Gurdon Buck, M.D., Surgeon to the New York and Presbyterian Hospitals; Thos. M. Markoe, M.D., Prof. of Surgery, College of Physicians and Surgeons, New York; Jas. M. Minor, M.D., Surgeon to Brooklyn City Hospital; D. Tilden Brown, M.D., Resident Physician, Bloomingdale Asylum; R. L. Parsons, M.D., Resident Physician, New York City Lunatic Asylum; S. Oakley Vanderpoel, M.D., Health Officer of the Port of New York; Wm. H. Macy, Governor of New York Hospital and Bloomingdale Asylum.

The Committee retired for deliberation, and upon returning, presented the following resolutions, which were unanimously adopted:—

Resolved: 1st. That having made a careful inspection of the building and grounds of the Institution, we believe that the soil and site, on high ground, commanding extensive and beautiful views, is one of the most desirable that could have been selected.

2d. That we have been impressed by the simplicity, solidity, thoroughness, and completeness, of its structure.

3d. That the ample supply of water, and perfect provision for drainage, are everything that can be desired.

4th. That we believe the design of its internal arrangement, the dimensions of its apartments, their general effect for cheerfulness, and convenient and beneficial classification of its patients, are all that the present knowledge in hospital construction and the principles of sanitary architecture can suggest or demand. We also believe that the Institution has been commenced under enlightened views of the requirements of the insane, and that no diminution of the scale of liberal accommodation, or excellence of material, or thoroughness of workmanship, would be wise or expedient.

5th. That the number of patients necessarily crowded into some of the wards, exceeding the accommodations yet provided for them, renders imperative a speedy enlargement of the building.

On motion, it was ordered that properly authenticated copies of these resolutions be addressed to the Executive Officers of the State, and the Executive Committee of the Board of Managers of the Hospital, and be furnished to the *Sanitarian* and MEDICAL RECORD for publication.

Adjourned.

JARED LINSLY, M.D., *Chairman.*

CHAS. M. ALLIN, M.D., *Secretary.*

DILATATION OF THE OS UTERI IN PARTURITION.—Prof. Alexander J. C. Skene, M.D. (*Am. Jour. Obstetrics*), gives the following conditions requiring artificial dilatation:—

1st. When it is necessary to induce premature parturition at any period of pregnancy.

2d. When labor-pain continues for a long time, so as to tire the patient before the os begins to dilate perceptibly.

3d. When the membranes rupture before the os is dilated sufficiently to permit the presenting portion of the child to engage in it.

4th. In cases where the membranes stretch across the os, but do not project into it, either from the condition of the membranes, or of the low position of the child's head.

5th. When the membranes dilate the os sufficiently to admit the head or breech of the child, but, from some cause, the presenting part does not descend to complete dilatation. Artificial dilatation is required in such cases to facilitate the manual or instrumental delivery, which is generally necessary.

6th. When the os is rigid, and does not yield to the natural causes of dilatation.

In such cases artificial dilatation is occasionally difficult. When the parts do not yield readily to the hydrostatic dilator, the os may be incised at several points. For this purpose he uses a knife which he devised for a uterine scarificator. Its shape is like an ordinary uterine sound, divided longitudinally into two equal parts, one of which is probe-pointed and fixed into the handle; the other, a little shorter, is made at the end like a pointed bistoury. The two halves are held together, like the blades of a scissors, by a button, and when the blades are closed, it looks exactly like a uterine sound or probe.

A COTTAGE HOSPITAL.—Miss Trafford Southwell, Honington Hall, England, has given a cottage hospital to the town of Welbach, and endowed the institution with £5,000.

ELECTRO-THERAPEUTICAL SOCIETY OF NEW YORK.—The officers of this Society, for 1873, are: *President*, Meredith Clymer, M.D.; *Secretary*, T. P. Corbally, M.D.; *Executive Committee*, Drs. Geo. M. Beard, W. R. Fisher, and A. D. Rockwell.

THE MEDICAL DEPARTMENT OF DARTMOUTH COLLEGE.—The New Hampshire Legislature has appropriated $5,000 to complete the renovation of the medical building connected with Dartmouth College.

A QUAINT EPITAPH.—The following epitaph was written on Sir Fielding Ould, M.D., an eminent midwifery practitioner in Dublin, in the last century:—

> "Sir Fielding Ould was made a Knight,
> He should have been a Lord by right,
> For then each lady's prayer would be,
> O Lord! good Lord! deliver me."

NEW YORK PHYSICIANS.—The *New York Medical Register* for 1873–74, contains the names of 1,974 regular physicians who are practising in this city and vicinity.

BOYLSTON PRIZE.—The Boylston Prize Committee has awarded a prize of $150 to D. F. Lincoln, M.D., of Boston, for a dissertation on "Electro-therapeutics;" and one of same amount to Wm. C. Dabney, M.D., of Charlottesville, Virginia, for a paper on the "Value of Chemistry to the Medical Practitioner."

NEW JERSEY STATE MEDICAL SOCIETY.—The following officers were elected for the ensuing year: *President*, Dr. T. J. Thomason, of Monmouth; *First Vice-President*, Dr. Geo. H. Larison, of Hunterdon; *Second Vice-President*, Dr. Wm. O'Gorman, of Essex; *Third Vice-President*, Dr. J. V. Schenck, of Camden; *Recording Secretary*, Dr. Wm. Pierson, of Essex; *Corresponding Secretary*, Dr. Wm. Elmer, of Mercer; *Treasurer*, Dr. H. B. Baldwin, of Middlesex. The next Annual Meeting will be held at Long Branch.

New Publications.

BOOKS RECEIVED.

LECTURES ON DISEASES AND INJURIES OF THE EAR, delivered at St. George's Hospital. By W. B. DALBY, F.R.C.S., etc. Philadelphia: Lindsay & Blakiston. 1873.

AN ESSAY ON THE PRINCIPLES OF MENTAL HYGIENE. By D. A. GORTON, M.D. Philadelphia: J. B. Lippincott & Co. 1873.

THE STUDENT'S GUIDE TO MEDICAL DIAGNOSIS. By SAMUEL FENWICK, M.D., F.R.C.P. Third rev. ed. Philadelphia: H. C. Lea. 1873.

THE PHYSICIAN'S VISITING LIST FOR 1874. Philadelphia: Lindsay & Blakiston. 1873.

THE PRINCIPLES AND PRACTICE OF MEDICAL JURISPRUDENCE. By ALFRED SWAINE TAYLOR, M.D., F.R.S., Fellow Royal College of Physicians. Second edition. In 2 vols. Philadelphia: Henry C. Lea. 1873.

TREATISE ON THE DISEASES OF THE EYE, INCLUDING THE ANATOMY OF THE ORGAN. By CARL STELLWAG (VON CARION). Translated from the fourth German edition and edited by D. B. ST. JOHN ROOSA, M.D., CHAS. S. BULL, M.D., and CHARLES E. HACKLEY, M.D. Fourth revised and enlarged edition. New York: William Wood. 1873.

A TREATISE ON THE DISEASES OF THE EYE. By J. SOELBERG WELLS, F.R.C.S., Doctor of Medicine of University of Edinburgh. Second American from third English edition. Philadelphia: H. C. Lea. 1873.

Original Lectures.

JAUNDICE. PNEUMONIA, AND PLEURISY.

A CLINICAL LECTURE DELIVERED AT BELLEVUE HOSPITAL,

BY PROF. A. L. LOOMIS, M.D.

(Phonographically reported for THE MEDICAL RECORD.)

GENTLEMEN:—The first patient I bring before you this afternoon is a young man, nineteen years of age, a drug clerk. Two weeks ago he began to suffer from loss of appetite, every article of food became offensive to him, and about a week afterwards he began to get yellow. The yellow color first made its appearance in the conjunctiva, but he had no yellow vision. His habits have been good.

His skin, as you see, is at the present time of a bright golden yellow, his urine red, looks like port-wine, his stools are clay-colored, and he feels weak.

He never has had chills and fever; has had no pain or vomiting.

We have before us, then, a case of *jaundice*, and in the first place let us notice some of the causes which would give rise to such a jaundice as this. There is unquestionably an obstruction in the bile-ducts which prevents the free flow of bile into the intestinal canal.

This obstruction may be produced, 1st, by a gall-stone, and pain is one of the prominent, if not the most prominent symptom by which we recognize the presence of this obstruction. The pain in jaundice produced from an obstruction caused by the presence of a gall-stone in the bile-ducts, precedes the jaundice usually twenty-four or thirty-six hours. This pain is somewhat peculiar; it originates in the epigastrium, usually in the immediate region of the bile-ducts, and strikes directly through to the back.

To determine the situation of the bile-ducts draw a line from the right nipple to the umbilicus, and the point where this line crosses the free border of the ribs will indicate it very nearly.

This man has had no pain since his sickness began, and it is altogether probable, therefore, that the jaundice is not dependent upon an obstruction produced by a gall-stone.

Another cause which will produce obstruction of the bile-ducts is an acute catarrhal inflammation. This acute inflammation of the mucous membrane lining the bile-ducts is not primary, but is usually propagated from an inflammation in the duodenum. Again, inflammation of the duodenum does not usually occur as a primary inflammation, but is almost always associated with gastric catarrh as the primary disease.

In acute gastric catarrh, vomiting is almost always present, although in many cases it may not be very severe; but you may expect vomiting, some pain, and a burning sensation at the epigastrium. (The patient was then placed upon the table, and prepared for physical examination.) As pressure is made in the epigastric region, there is manifestly considerable tenderness, yet the patient gives us no history of vomiting. Vomiting, however, we would not regard as absolutely essential to determine the existence of acute gastric catarrh, inasmuch as it may not be present, although it almost always is. In very mild cases there may be simply a loss of appetite to indicate the existence of gastric disturbance.

The first thing which this man noticed was a loss of appetite and nausea, and now he has great tenderness over the region of the bile-ducts and epigastrium, and these alone are sufficient to indicate some gastric inflammation. The obstruction of the bile-ducts, in these cases of acute catarrh, comes from the tumefaction or thickening of the mucous membrane, and more or less from the accompanying secretion.

This inflammation may only involve the hepatic duct, and ductus communis, or it may extend far up into the ducts. As a general rule the catarrhal inflammation extends up quite a distance towards the lobules of the liver. When this inflammatory process has produced sufficient thickening of the mucous membrane to obstruct the ducts, the bile is retained and reabsorbed, giving rise to the jaundiced hue of the skin.

There will usually be some fever present in these cases, generally of a simple ephemeral character, if dependent upon the jaundice alone.

The two principal causes of acute jaundice have been named; obstruction from gall-stones, and an obstruction which occurs in connection with acute catarrh of the bile-ducts.

Jaundice may occur under a variety of circumstances. It may occur from intense congestion of the liver. Sometimes in malarial fevers the congestion is sufficient to cause acute jaundice, but the cases are rare. It may come from pressure on the bile-ducts produced in a variety of ways, and from a variety of causes. There may be the development of a tumor in the transverse fissure of the liver, which by its mechanical pressure obstructs the bile-ducts, and in this way gives rise to jaundice. In such a case, however, the appearance and extent of the jaundice would be influenced by the growth of the tumor, and it would as a rule be developed slowly. Almost all cases of acute jaundice are due to one of the two causes first named.

In most cases of acute jaundice we have a slight enlargement of the liver, which is due to distention of the ducts with bile. As we make percussion upon this patient it is seen that the liver is enlarged in all directions. In the median line, the line of hepatic dulness extends fully four inches from above downwards.

This is an ordinary occurrence in jaundice, and usually we also get more or less tenderness over the hepatic region, as you see in this case, the patient shrinking when percussion is made. We have in jaundice not only a turning back of the bile, but there is soon more or less hyperæmia, which may account for the tenderness.

The question is asked, Might not abscess of the liver give rise to acute jaundice? It might, and the first question you would ask, if your suspicion turned in the direction of abscess, would be, Has the patient ever had dysentery? The reason for asking that question is, that dysentery is the most common cause of abscess in the liver, or rather abscess of the liver most frequently occurs with dysentery. It is believed by some that it produces abscess of the liver by embolism, but I am not quite sure about that.

Abscess is very frequently associated with dysentery, but how they are connected with each other I do not know. What the connection is, is not exactly clear. It may be due to embolism, but I am certain that it is not in the great majority of cases, because the embolus cannot be found at the post-mortems, which it should be, if productive of such grave results.

It is simply a clinical fact, and I have never seen a case where the plugging up of the artery has been found.

Abscess would be excluded in this case because the man has had no dysentery, and has no history which would lead us to suspect the presence of pus in

any part of the body. His history is too short for abscess, which, as a rule, has a long history. There is no hectic fever, his pulse is 70, and his temperature not raised. In abscess the pulse will be accelerated and small in character.

Pyæmia sometimes produces jaundice; and it is very common in connection with all diseases which depend on blood-poisons. In these cases the jaundice is probably produced by some peculiar action of the septic poison on the blood, and the jaundice is not the bright golden yellow seen in this case. In the way of treatment, leeches are suggested, and a much worse thing might be done than that. Counter-irritation is one of the means which may be employed to subdue the inflammation, and it may be in the form of dry cups, leeches, or perhaps a blister over the liver, as an attempt to relieve the catarrh.

It is well, however, to recollect one thing, and that is, that catarrhal inflammations are self-limited, unless the stimulus which produced them is kept up. They have a period of dryness, congestion, and secretion; first, an increase of the normal secretion of mucous membranes, and then muco-purulent. After a certain amount of this secretion has been poured out, unless the inflammatory stimulus is kept up, recovery is rapid and complete.

I do not believe that calomel would be of any benefit in such a case as this, and I would not have you go off with the idea that calomel must be given to act in some peculiar way, because there is hepatic disturbance. If you wish to stimulate the glands of the intestine to action, very well; there is no doubt but that calomel acts as a stimulus to the glands, but everything that is necessary in such a case as this can be accomplished just as well by mild saline cathartics as by calomel. I would not give stimulants, because as a general rule acute catarrhal inflammations are not benefited by stimulants, wherever the inflammation may be. The best diet for the patient is such food as will be digested as far as possible in the stomach.

The second case which I present to you is one in which there is some question among the gentlemen who have examined it in regard to diagnosis. It is a case of special importance, for it belongs to a class of cases which you will frequently meet in practice, and your credit may be very much affected should you err in diagnosis and prognosis. This young girl, 22 years of age, has been sick four weeks. She was first taken with a chill, which lasted her for most of the time during one night. Immediately following the chill, or chilly feeling, she says her "chest got sore;" that this soreness extended over the whole of the chest; that there was no more pain upon one side than the other, except when she drew a long breath, and then she felt the most pain in the left side. She had a great deal of fever at the time she was taken, but at no time cough or expectoration. Since her entrance into the hospital, three weeks after she was taken sick, she has had a slight cough, accompanied by a scanty yellow expectoration, and there has been some blood through it. Her chief symptoms, therefore, are difficulty of breathing, following the chill; fever, but accompanied with no cough and expectoration, or pain, except upon a full inspiration. Her pulse is 114, feeble, rapid, easily compressed, and the temperature 99¼. So much for the history of the case.

Physical examination of the chest, for the history directs our attention in that direction, gives us the following:

Palpation.—Vocal fremitus is negative, her voice not being sufficiently strong to give any vibrations to the chest-walls.

Vocal fremitus is a very important sign, because in connection with consolidation of the lung it is increased, and where fluid is present in the pleural cavity it is absent. Hence its importance in making a differential diagnosis between pleurisy with effusion and pneumonia.

Percussion.—There is complete flatness over the posterior portion of the left lung. Over the posterior portion of the right lung the resonance is slightly increased.

Anteriorly, there is dulness in the infra-clavicular space of the left side, but not flatness. Upon the right side the percussion-note is about normal.

Auscultation.—Bronchial respiration is heard all over the left lung posteriorly, being heard distinctly *low down*. There are no râles present except an occasional unimportant mucous râle connected with the bronchial tubes.

Over the right lung, posteriorly, respiration is exaggerated and vesicular in character. *Anteriorly*, upon the left side no râles, and upon the right side purely vesicular respiration, but somewhat exaggerated.

These are the physical signs, and together with the history of the case present some interesting points in connection with pneumonia and pleurisy.

First, with regard to pleurisy. The fever and the pain in the side which the patient had at the commencement of the attack might indicate the presence of pleurisy, yet the pain was not sufficiently severe to warrant the conclusion that the pleurisy was the leading feature of the disease. The existence of pleurisy would not be determined, therefore, by the amount of pain which the patient suffered.

The complete flatness upon percussion over the affected side, and the absence of all respiratory sounds except along the course where the bronchial breathing is present, tells us of the existence of pleurisy. The bronchial breathing is sometimes heard in subacute pleurisy, but it is *high up* and never at the lower portion of the lung, as in this case. This bronchial breathing always means lung consolidation, and in this case being heard over the lower portion of the lung affected, leads us towards pneumonia as the cause of the consolidation. The patient, however, has had no cough and expectoration until three weeks after the accession of the disease. We usually have the characteristic expectoration of pneumonia present within two or three days after the occurrence of the chill; but in this case we have had no expectoration at all in the acute stage. The bronchial respiration, however, over the entire lung, lower as well as upper portion, may lead us safely to conclude that consolidation is present as the result of pneumonia.

There is probably no way of determining this question positively as regards the presence or absence of fluid in the cavity except by the use of the exploring trocar, although we might be led to exclude fluid from the fact of hearing bronchial respiration down to the bottom of the pleural cavity. In this case the patient has been tapped in the way indicated, and no fluid was found.

Our diagnosis, therefore, must be that this is a case of pulmonary consolidation, with a large amount of plastic exudation. The material which has been poured out in this case as the result of the pleurisy is not fluid, but is of a gelatinous character, and it has been poured out in such abundance that it has caused some compression of the lung, which has undergone more or less consolidation.

The case now becomes one of interest with regard to prognosis. In the first place, a pulmonary consolidation which has lasted for four weeks means something.

Bronchial respiration heard over a lung, when there is no fluid in the pleural cavity, unquestionably indicates pulmonary consolidation. The cause of that consolidation is not so clear. The rational history of croupous pneumonia, in many respects, is wanting. Still, I believe that consolidation of a pneumonic character takes place in lungs compressed by extensive plastic exudation without the patient's giving a clear pneumonic history, and that pleuro-pneumonia, under these circumstances, resolves slowly. Always when pleurisy is marked during the course of a pneumonia, the resolution is very slow, and yet as a rule these cases recover entirely without the development of phthisis.

If it were not for the morbid pleuritic element in this case, all the physical signs present would lead one to the diagnosis of pulmonary consolidation alone, and of four weeks' standing; the case then would be much worse than it now is, in a prognostic point of view; for then we might expect purulent infiltration or cheesy degeneration of the consolidated portion. This lung will undoubtedly be crippled for a long time, but resolution will finally be completely accomplished.

The patient must be sustained by good diet, tonic remedies, and the best hygienic influences. If anything depressing occurs to the patient, the pleuritic exudation may become cheesy, and after a time be the nidus of a tubercular development, so that the prognosis, although good, must be qualified.

This, gentlemen, is one of a class of cases you will occasionally meet with, and it is well worthy of your careful study.

ON LARYNGEAL PHTHISIS.

THE ABSTRACT OF A LECTURE DELIVERED

BY DR. MORELL MACKENZIE, M.D., LONDON,

PHYSICIAN TO THE HOSPITAL FOR DISEASES OF THE THROAT, ASSISTANT PHYSICIAN TO THE LONDON HOSPITAL, ETC., AT THE LONDON HOSPITAL.

(Reported for THE MEDICAL RECORD.)

DR. MACKENZIE commenced his lecture by stating how very infrequently phthisical affections are met with in young patients. This is especially true of patients under twelve years of age.

In Dr. Mackenzie's very large practice, both in private and at the Throat Hospital, he only remembers to have encountered laryngeal phthisis three times in children under three years. It must be considered as a disease which attacks almost exclusively persons who have reached the middle age of life.

Amongst the symptoms of laryngeal phthisis, difficulty of swallowing and loss of voice are the most characteristic. In some instances these may become typical.

Aphonia is more commonly met with than dysphagia. The first patient presented to his students complained also of shortness of breath, which became troublesome upon the slightest effort made by him. Here the loss of voice had preceded the embarrassment of the respiration for two months. One month after the patient had completely lost all power over his voice he became unmistakably thinner.

The symptom dysphagia, in the affection under consideration, often leads to the patient taking less food than he otherwise would, and thus of course proper nutrition is materially interfered with.

Dr. Mackenzie here asks, What would be a complete definition of laryngeal phthisis? For him it consists essentially in a chronic thickening, with ulceration, of the mucous membrane of the larynx, always accompanied with loss of voice, and generally with dysphagia. In the majority of instances it follows disease of the lung tissue (five-sixths of cases). A small proportion of cases are found, however, where one is unable to detect morbid pulmonary conditions.

It must be admitted, that in some few of these last-mentioned cases tubercle may be actually present in the lung, although not recognized by the most rigid and careful examination of the chest.

If an individual in a poor state of health catches cold, laryngeal phthisis is the consequence; whereas in another and more healthy person the same cause would produce ordinary simple laryngitis.

In syphilitic affections of the larynx, large ulcerations are frequently seen without any notable previous thickening. In laryngeal phthisis, on the contrary, we always get thickening before ulceration.

The character of the cough is oftentimes typical. It is frequent and irritable. In fact, it occasionally becomes so obstinate in its recurrence that it is beyond the physician's control, and all prescriptions appear equally inefficacious. This cough is not always present, but, when it is, is no doubt to be explained by irritation of the terminal nerves which supply the glottis.

The respiratory symptoms are generally marked. They may usually be expressed by the term shortness of breath.

By the use of the laryngoscope we can diagnose three forms of laryngeal phthisis.

First. The form where pyriform swellings exist on each side of the laryngeal opening.

The narrow portion of these swellings corresponds to the ary-epiglottic folds; the more enlarged parts to the cartilage of Wrisberg and the capitulum Santorini. If this form of tumefaction is perceived, we can be sure that the case is one of laryngeal phthisis, and that it will terminate fatally.

Secondly. The swollen or turban-like appearance of the epiglottis. This form was first described by Rokitansky.

Thirdly. The carious form of laryngeal phthisis.

Here we find small ulcers all over the surface of the larynx, to which may be added a certain amount of chronic thickening.

This last-mentioned division is the slowest form of laryngeal phthisis; sometimes sufferers from it live so long as five years. When we encounter the first form (pyriform swelling), we should not expect life to last more than a year. If the epiglottis is thickened and tumefied, the march is more rapid still; and the patients are, moreover, much annoyed by persistent dysphagia. With regard to the pathology of these cases, we shall merely remark that interstitial deposit is quickly followed by ulceration, and finally the period of necrosis (or rather caries, as it should be called) of the cartilages is reached. In by far the majority of cases, where we find caries of the cartilages we consider it as due to laryngeal phthisis. Those that remain are attributable to syphilis or to the exanthemata.

Here Dr. Mackenzie stated that laryngeal phthisis was more commonly met with in males than females. Occasionally patients accuse spitting of blood amongst their antecedents. In these cases hemoptysis must be accounted for by concomitant lung disease, as it is very rarely met with where laryngeal phthisis exists alone. In some cases the persons who attend at the hospital give good family histories, free from facts

which might lead one to presume the existence of hereditary tuberculosis. These statements are not to be relied on, so badly do poorer patients observe themselves, so imperfectly are they familiar with (in this connection) their real antecedents. The patients frequently speak of having caught cold not long ago. No doubt in these, as in most other cases, the origin of actual trouble in the larynx is to be found in catarrhal affections of the mucous membrane covering the respiratory tract. It is important in this place to observe, there is very little expectoration in diseases of the larynx. Upon this symptom the differential diagnosis with lung affections may be based in part. If there is much expectoration in a given case, we may be positive that the lungs are attacked, whether it be by bronchitis, tubercle, or still some other form of lung trouble. In laryngeal phthisis dysphagia is frequently owing to the fact that the epiglottic valve, in the effort of deglutition, imperfectly closes the laryngeal opening, and food passes into its cavity. The patients, after vain endeavors to accomplish this function, refuse to eat except so far as is rendered imperative by a feeling of intense hunger. Soon the loss of flesh and strength follow.

The way to meet this difficulty is to introduce a tube through the mouth, just below the epiglottis, and administer nutritive substances by means of injections made by the tube. There is no necessity to pass the tube down so far as the stomach. The aliments must not always be the same. They are to be varied constantly, and the diet should not be made up exclusively of finely divided meat and soups. Vegetable food ought also to be given from time to time, and in the form of purl of different kinds.

In all forms of laryngeal phthisis, we may consider it as settled that little really useful can be done outside of local applications. Amongst these Dr. Mackenzie especially recommends the use of the solution of perchloride of iron (in the proportion of a drachm of solid ferri-perchloride to an ounce of water). This solution gives much temporary relief, and is especially serviceable in the form where pyriform tumefaction exists.

In some cases where the iron is no longer to be depended upon for giving even temporary good results, we may resort with considerable advantage to the use of solutions of the chloride of zinc. According to Marcet, scarifications, followed by applications of tincture of iodine, may be relied upon. Mackenzie affirms that he has sometimes found bad consequences to follow this method of treatment, and as we are unable to cure the disease, except in very exceptional cases, it is better and safer to confine our local treatment of laryngeal phthisis to the employment of the astringent palliatives.

THE ALUMNI ASSOCIATION OF BELLEVUE HOSPITAL COLLEGE.—This Association had its first annual dinner at Delmonico's, on the evening of October 30. A large number were present, including some distinguished invited guests. Toasts were responded to by Prof. A. B. Crosby, Rev. E. H. Chapin, Hon. W. W. Phelps, Chancellor Crosby, E. C. Stedman, Rev. Dr. Potter, and Dr. M. H. Henry. The reunion was a success from many points of view and bids fair to become an established yearly proceeding. Prof. William T. Lusk, M.D., is the President.

Original Communications.

A CASE OF INVERSION OF UTERUS AFTER DELIVERY—REDUCTION.

BY ALEXANDER N. DOUGHERTY, M.D.,

NEWARK, N. J.

MRS. N——, æt. twenty, primipara, ten months married, was taken in labor in the night of Oct. 11th inst., and at twenty minutes to 9 A.M. of the 12th, was delivered of a male child, well developed, which had presented by the head. She was attended by a physician of long experience, who says he made moderate traction on the cord, when suddenly the placenta came away, followed immediately by inversion of the uterus. He endeavored at once to replace it, and succeeded so far as to return the organ into the vagina, and simultaneously sent for me as counsel.

I arrived about half-past 9, and introducing my right hand, encountered the inverted uterus, which constituted a mass as large as the double fist. The other hand, placed above the os pubis, discovered there a funnel instead of a globe. Partially flexing the fingers and thumb in the vagina, so as with the palm to make a cup, I proceeded to reduce the organ thus: The uterine mass fitted into the hollow of the hand; the ends of the digits were applied to the open angle existing at the point where the inversion had ceased (for the abnormity included but about four-fifths of the organ), and then by a combination of gentle pushing and compression—the left hand being applied above the pubes for counter-pressure—the uterus was little by little returned, the last portion down being the first to go up. The operation did not take more than five minutes.

I saw the patient on the 25th, and made a digital examination. The mouth of the womb was so contracted as not to admit the tip of the finger. There was evidently subinvolution; the organ was tilted backward and was quite voluminous, having a flabby and spongy feel, and was sensitive to pressure posteriorly.

This is the only case of acute inversion I have seen during a practice of twenty-seven years. I may mention, however, a case of chronic inversion, that of a Mrs. D——, living here, who met with the accident twenty-eight years ago, under the care of an old and experienced practitioner. He, however, would appear not to have discovered the nature of the case for some weeks—indeed not until his attention was called by the patient to the presence of a body which, when she sat on the night-chair, came down and interfered with the natural evacuations.

This lady is now about forty-eight years old; she still menstruates, though rather irregularly, the show being brought on at any time from excitement or overexertion.

She is a full habited woman with a rosy complexion, and in the enjoyment of such a measure of health as, with the near prospect of the menopause, disinclines her to have any attempts made at reduction. It seems when the doctor first became aware of the mishap he proposed to try and remedy it, but she positively refused her consent.

NEWARK, N. J., Oct. 27, 1873.

M. COSTE, the illustrious professor of embryology, and the creator and promulgator *par excellence* of pisciculture and ostreaculture, died September 19th, of an intestinal occlusion, aged 66 years.

CAOUTCHOUC ELECTUARY AS A REMEDIAL AGENT.

By THEODORE R. VARICK, M.D.,

JERSEY CITY, N. J.

At the solicitation of several friends I have been induced to call the attention of the profession to the use of caoutchouc as a remedial agent. I have been in the habit for the past fifteen years of prescribing it, in preference to cod-liver oil, in certain cases of pulmonary tuberculosis in every stage, in chronic bronchitis, or the winter coughs of old people, and in chronic rheumatism.

Under its use I have observed a decided improvement in digestion and hæmatosis, as well as general tonic effects. It seems to be adapted to cases in which cod-liver oil is contra-indicated, and especially those in which there is a frequent occurrence of hæmoptysis. It is not claimed to be a remedy which has any specific action, but that it diminishes excessive mucous secretion and suppuration, arrests hæmorrhage and excessive perspiration, and retards emaciation.

Prepared in the following manner, I have usually prescribed it in doses of a teaspoonful three times a day, about two hours *after* meals.

SOLUTION OF CAOUTCHOUC.

℞. Caoutchouc (in thin slices)..... ℥i.
Ol. terebinth..... ℥ij.
M.

Macerate until solution is effected, and strain through coarse muslin.

ELECTUARY OF CAOUTCHOUC.

℞. Solut. caoutchouc..... ℥ij.
Sacch. alb..... ℥iss.
Mellis (strained)..... ℥iiss.
M.

The mixture should be of opaque yellow color, and thick enough to run *very* slowly off a spoon. It contains about two grains of pure caoutchouc to each teaspoonful. A relative comparison of caoutchouc and cod-liver oil as to the amount of carbon and hydrogen in each, shows the following result:

Prof. Faraday's analysis of caoutchouc gives in 100 parts 87.2 carbon, and 12.8 hydrogen (U. S. Disp., pp. 1255).

Besides various acids, butyric, felluric, cholic, etc., and traces of iodine and other metals, De Jongh finds in 100 parts of cod-liver oil 37 carbon, 34 hydrogen.

RESUMÉ.

100 parts caoutchouc contains of carbon, 87.2; hydrogen, 12.8.
100 parts cod-liver oil contains of carbon, 37; hydrogen, 34.

Percentage of carbon in caoutchouc over cod-liver oil, 135 per cent.

Is the caoutchouc itself available as respiratory force?

I append to this article a communication from my friend Dr. J. E. Culver, of this city, in reference to the subject under consideration.

JERSEY CITY, N. J., Oct. 17, 1873.

DEAR DOCTOR:—Several years ago you recommended me to try the caoutchouc confection in a case of phthisis pulmonalis. I have since used it in numerous cases of phthisis and of muco-purulent bronchial catarrh. Its remedial action, as observed in the cases in which I have prescribed it, fully sustains its claim to the medicinal virtues which your prior and wider experience had already demonstrated it to possess.

Its power to diminish suppuration is very remarkable; hence, doubtless, the prompt relief it affords in some purulent catarrhs, and hence too its conservative efficacy in retarding the softening of tubercular deposits. It does not relieve cough otherwise than by lessening the quantity and changing the quality of the matters to be expectorated. In recurring bronchial hemorrhages, whether in the phthisical or non-phthisical, it is a most reliable and satisfactory remedy; for it controls the hæmoptysis not as a hæmostatic merely, but it soon so improves the blood in the quality of its fibrin as effectually to prevent a recurrence.

It is futile to administer the caoutchouc confection in but a single dose, or for a single day, in chronic diseases; its use should be persevered in for weeks—for months in phthisis. Its continued administration develops no unpleasant effect. It will not do, however, to use the caoutchouc in a state of greater concentration. I once directed the confection to be made of double strength, and my patient's stomach rejected it. Yours truly,

J. E. CULVER, M.D.

COMMINUTED FRACTURE OF THE CLAVICLE; COMPRESSION OF THE SUBCLAVIAN VEIN AND SUBJACENT PLEXUS OF NERVES BY A FRAGMENT.

By H. W. BOONE, M.D.,

A. A. SURG. U. S. A., FT. HALL, IDAHO.

CHAS. W., native of U. S., age 28, tavern-keeper, a large, powerfully built man, in robust health. On the 11th of February, while he was driving a pair of horses, they took fright and threw him out; he landed on his right shoulder with great violence, striking against the string-piece of a bridge. When he applied for treatment, three hours afterwards, I found that the clavicle was broken and comminuted about at the middle portion. One fragment, about an inch and a quarter in length, was tilted so as to lay transversely between the two larger ones; there was much deformity.

The arm was cold, and there was considerable swelling of the veins; no sensation in forearm or fingers, while the patient complained of pain at the seat of the fracture. The patient was placed in bed with his head and shoulders low, and his arm was supported by a pillow. Efforts were made to alter the position of the inverted fragment, but proved ineffectual. The arm was secured to the chest by a strip of adhesive plaster round the body; the whole limb was then enveloped in cotton batting and covered with a light blanket, and the room was kept at a warm, even temperature.

On the following day there was considerable swelling about the neck and shoulder, with some extravasation of blood, the arm was much swollen, and there was no sensation in the hand or fingers.

Feb. 13th. The swelling has increased very much; some incisions were made in the upper part of forearm and in the arm; warm-water dressing applied. From this time the case did well, the swelling gradually going down, and after some weeks he returned to his usual occupation. There is some decrease in the width of the right shoulder, and it is lower than the other. He has good use of his arm, however, and it appears to be quite strong. The deformity in the clavicle is quite prominent. A sensation of numbness in his hand and fingers remained for some time, but has ceased to

trouble him. In this kind of fracture the fragments may cause great injury by pressing upon or lacerating the subclavian vein and the brachial plexus, or by wounding the artery. These results appear to be uncommon, although the late Sir Robert Peel is reported to have died from a laceration of the subclavian vein.

It has occurred to me that in a case of this kind it might be good surgery to cut down upon and remove the offending fragment, where there seemed to be any danger of its wounding the artery or vein. This would of course render the fracture a compound one, but with careful dressing no serious trouble need be apprehended, and the greater danger would be removed.

Reports of Hospitals.

BELLEVUE HOSPITAL.

NOTES OF PRACTICE AND PECULIARITIES IN TREATMENT.

GOUT.

A CASE of this disease was noticed which possessed some points of interest. It was in a man 34 years old, with a personal history slightly suspicious with regard to temperance.

There were no nodules of the usual deposit in the helix of the ears, but little concretions could be felt in the bursa over the right olecranon. Hereditary tendency in the case doubtful. The man has had several attacks, and all have heretofore been regarded as rheumatic in character showing the occasional difficulty met with in making a correct diagnosis. As a matter of course, Colchicum entered largely into the treatment of the case. The method of administration, however, is somewhat varied. It is thought to be more serviceable in these cases when carried to the point of producing emesis at the commencement of the treatment of a case. It is believed that administered after this manner it renders the attacks less liable to recur.

Lithia, in the form of "Regia Lithia," is another remedy usually administered, for it is supposed to have the power of rendering a chemical combination with the *Uric acid*, which is highly soluble. The carbonate or Citrate of Lithia is employed in 5 gr. doses t. i. d. when the "Regia" is not at hand.

HÆMOPTYSIS.

Our attention was called to a very interesting case of this character, which had been occurring at intervals of about one year for eight years, without presenting any physical evidences of disease of the lungs until the present admission, and these at present are not well marked. It is a point to be considered whether the recurring hæmoptysis has produced the lesion in the lungs, or the lesion has given rise to the hæmoptysis. It was believed, however, to be one of those cases of hemorrhage from the lungs which has *not* been dependent upon the continued existence of lung lesions or the presence of tubercles.

Upon admission his bleeding had been profuse, and he had bled to fainting. Fl. Ext. of Ergot in doses of gtts. xv. was administered every two hours, and Turpentine covered with hot cloths applied to the chest. Hemorrhage soon ceased, and he is now receiving tonic treatment. The Ergot is said to have a peculiar effect upon the vaso-motor nerves of the blood-vessels.

TYPHOID FEVER.

The case noticed was one which presented many of the symptoms of the disease, which rendered the diagnosis undoubted. The treatment which the man was receiving consisted of the administration of quinine in ten-grain doses three times a day, and phosphoric acid drink. Sponging and the use of the wet pack were resorted to for the purpose of reducing his temperature, which ran up to 104½° at evening. The manner of applying the pack consisted in wrapping the patient in a sheet wet in cold water; over this were placed two dry blankets, and the patient placed in bed. Quinine in such doses was administered, with the view of assisting in the reduction of the temperature, and of prolonging the effect of the packing. It is also believed that the patients who receive quinine from the beginning of the disease are in a better condition when convalescence is established than those who do not receive it.

ACUTE BRIGHT'S DISEASE.

Two cases of this disease were seen which were especially interesting with regard to their treatment. Both were under what is known as the "water treatment."

One was a case of the disease following pregnancy; and the other in a man, and following an exposure to cold. Both of these patients were doing exceedingly well. The treatment consists in requiring the patients to drink as much water as possible each twenty-four hours, and also taking their food mostly in a fluid form, such as milk, soup, etc. One of the patients had been drinking from ℥ 70 to ℥ 100 of water daily, and with an improvement in her condition rapid and marked. Water is less apt to offend the stomach than any articles which have been attempted to be substituted for it, such as weak solutions of bitartrate of potassa, etc. No diuretic remedies were administered.

PARALYSIS.

A peculiar case of this kind was seen in the person of an intelligent woman, who, at the eighth month of her pregnancy, began to gradually lose the power of motion in her arms, and after a short time the same loss of motion began to affect her lower extremities, and she is now completely helpless. The rectum and bladder remain intact. Sensation also remains good. Appetite fair. Muscles remain in good condition. Duration about three months. This completes the history of the case. The treatment adopted in this case consists in the administration of $\frac{1}{12}$ of a grain of Sulphate of Strychnia daily and hypodermically, and the use of the galvanic battery.

Improvement is evident but slow.

EMPYEMA.

The patient was admitted to the Hospital in April, 1873, with one pleural cavity filled with fluid. His chest was aspirated three times. Fluid returned.

In June he began to have hectic, and soon after a free incision was made through the chest walls, and a large quantity of pus drawn off. The pus was extremely offensive. The pleural cavity was washed out with Carbolic Acid water of a strength of one part acid and one hundred parts water. The discharge varied from six to ten ounces for several days, then gradually diminished in quantity, and now is discharging only about two ounces of pus daily. The pleural cavity is now being washed out daily, and the general treatment is tonic. The patient is very comfortable, and able to be about his ward with ease. Another case in the same ward was cured by this plan of management. His difficulty, however, has reappeared, and he is again under treatment.

NIGHT SWEATS,

In connection with phthisis, empyema, etc., have been more successfully treated with $\frac{1}{250}$ grain doses of sulphate of atropia at bedtime than by any other-sized dose administered.

The size of the dose was accidental, but the results realized have been most gratifying. It is usually administered in cinnamon water.

PERITONITIS.

The importance of not relying upon pain as a symptom of peritonitis was again illustrated in a patient in whom the disease was not suspected, until post-mortem revealed its presence.

Absence of pain in this disease is of not infrequent occurrence.

PNEUMONIA.

Several cases of pneumonia were in the wards at this writing, and all are doing very well. Quinine, Carbonate of Ammonia for its stimulant effect, and whiskey or brandy, were the remedies chiefly relied upon in the cases seen. Quinine, when given for its apyogenic effect, it is said, must be given in large doses, and the patients receive, accordingly, 25 or 30 grains per day, and when a pneumonia is treated in this way a majority of the patients get well. When given in ordinary doses of five grains three times a day, a majority of the patients get well, and that without the administration of the remedy with any special reference to its apyogenic influence. "Who is who, and which is what?" might be a query with an outside observer.

LAXATIVES.

A new remedy has been introduced as a laxative, which is said to be preferable to many of the salines on account of its agreeable taste. It is the Sulphovinate of Soda in two-drachm doses.

Another very efficient and much-used laxative compound is the following:—

℞. Ext. Colocynth co.....grs. vi.
Ol. Caryophyl.....gtts. ij.
M.
Div. in pilulæ No. ii.

PARALYSIS AGITANS.

A case of this affection has manifested slight improvement under the use of fld. ext. Conium, ℥ vi., t. i. d.

In the use of this remedy it is essential that care should be taken to secure a good article if any effect would be realized, for most of the conium in the shops is worthless.

Squibb's preparation is thought to be reliable, notwithstanding some complaint has been made Concerning his Sulphuric Ether.

CHRONIC BRONCHITIS AND EMPHYSEMA.

An old man, who is the subject of this combination of disease, derives great comfort when suffering from the intense paroxysmal dyspnœa which commonly accompanies it, by taking drachm doses of

℞. Hoffman's anodyne,
M. Sol. Morphia (U. S.) āā

at the commencement of a paroxysm, and repeating it p. r. n.

CARDIAC.

This man has double aortic lesion, with a large amount of hypertrophy and dilatation of the left ventricle, the regurgitation being the more prominent of the valvular lesions. It was the result of acute articular rheumatism. One month ago his feet commenced swelling. Urine became scanty, acid, and s. g. 1014. Albumen very light. No microscopical examination. Now he has double pleuritic effusion, which is a very common occurrence in the progress of secondary Bright's disease. When this double pleuritic effusion occurs without inflammatory action, it is said to almost always mean Bright's disease. The œdema of the legs, the markedly increased difficulty of breathing, and the presence of albumen in the urine, whether there are casts or not, make it pretty certain that the kidneys are affected with what is usually called Bright's disease. In a great majority of these cases the kidneys are found in what has been known as the condition of cyanotic induration, but which is thought to be better expressed by the term chronic congestion. When examined with the naked eye these kidneys are found intensely red; and when cut into, the cut surface is of a more uniform red color than normal. The kidneys are sometimes almost of stony hardness. They are usually of normal size. When examined microscopically there is simply found a textural change of the normal elements of the kidney. The blood-vessels may be found filled with blood, but there does not seem to be any dilatation. The connective tissue is not increased. Epithelium unchanged or changed, according to vigor and continuance of the congestion. Hyaline casts in the tubes of the pyramids is the most constant lesion found.

In the treatment, set some one of the great emunctories at work to eliminate the fluid collected in the cellular tissue in different parts of the body. The kidneys are the best. It is considered desirable to give diuretics a trial before trying anything else. The standard diuretic for all those cases which demand a vigorous and efficient diurosis, such as the œdema of Bright's, or the effusion of subacute pleurisy, is the infusion of digitalis in half-ounce doses three times a day, combined with acetate, citrate, or bitartrate of potassa in full doses.

STRANGULATED HERNIA.

A case of this kind came into the service of Dr. Bull, House Surgeon of the 1st Surgical Division. The Dr. called the Aspirator to his assistance in the management of the case. The hernial sac was emptied of its contents, and the gut was aspirated, but no fluid was obtained. This, however, did not permit of the reduction of the gut by taxis. The ordinary operation was then performed by Dr. Gouley, the stricture being found at the external ring.

When the operation was performed it was thought that sufficient explanation was found for the failure to reduce by taxis, after the use of the Aspirator, in the fact that new adhesions had already formed about the neck of the sac, which held the parts in sufficiently firm coaptation to resist all efforts in that direction. This was an explanation of the non-success of the Aspirator in this case. If all cases in which the instrument may be used should receive as careful an analysis as this one received, it might soon be determined whether the operation of aspirating the hernial tumor is a valuable one or not in assisting its reduction.

SUBACUTE PLEURISY.

Four months ago this man had pain in his left side, unaccompanied by expectoration, although accompanied by slight cough. Upon admission his urine contained albumen, and had a specific gravity of 1006. The left pleural cavity is now filled with fluid to a level with the angle of the scapula.

This fluid is serous, because there is no history of night sweats or daily fever. But this is not always reliable evidence that the fluid is serous in such cases. The fact that the effusion is beginning to fall under the influence of diuretics and counter-irritation, is additional, if not better evidence, that it is serous. Still better evidence is obtained by exploring the chest with a hypodermic syringe.

It is well to bear in mind the fact that the side is always contracted after pleurisy, and make the statement that perhaps the side will never be as large as it was before the attack.

This man, under the influence of infusion of Digitalis and Acetate of Potash, is passing ℥120 of urine a day. Tincture of Iodine is being applied externally.

SCARLATINA.

Five weeks ago this man was seized with a chill, and that is all he remembers of his history. When admitted to the Hospital his friends could only give a rambling history of the case, embracing the fact that he was discovered first trying to get out of his room with no clothes on. His delirium was of the fiercest variety, endeavoring to bite everybody who came near him. His mouth was covered with a white scum, and he occasionally pointed to his mouth as though he wished a drink of water. There evidently had been some sore throat. Upon admission his skin was in a complete state of desquamation. Temperature during past four weeks has varied from 98⅘ to 99⅘°. This case, from the history, was set down as scarlet fever, although the history is very simple.

It not infrequently happens that in the period of desquamation there is noticed a slight puffiness about the face, a little swelling of the ankles, which may go on to general anasarca; a difficulty in breathing, which indicates that the lungs are participating in the same œdema; albumen is markedly present in the urine; also epithelial and granular casts; and the patient is said to be suffering from an attack of acute Bright's disease, or acute diffuse nephritis.

A very common opinion among the people, and shared in by many practitioners, is that the child—for this is more particularly a disease of children—has taken cold; that all this trouble has been brought on by some exposure.

This is believed to be a mistaken notion. On the other hand, these casts in the urine are to be regarded as one of the phenomena of the disease. Some years it is present in almost every case, while in others it is scarcely seen. It is an analogue to the desquamation of the cuticle, and may take place entirely independent of exposure to cold. The result of this acute desquamation of the epithelium from the tubes of the kidneys is a disturbance of function; hence the general symptoms, such as the œdema, etc. The changes which are found in such kidneys are only such as are readily remedied, and the patient may be restored to perfect health. This is the general rule. The changes consist in a degeneration and desquamation of the epithelium; hence the appearance of epithelial, granular, hyaline, and sometimes blood-casts in the urine and floating epithelial débris; and there is also an accumulation of small round cells between the tubes, most apparent in the cortex, together with a certain amount of fluid.

These kidneys have a succulent appearance, and are usually increased in size. A proper method of treating these cases is, therefore, to call to our assistance diaphoresis, perhaps catharsis; but better, a non-stimulating diuresis to wash out the desquamated material from the tubes, and this, it is said, can be best accomplished by infusion of digitalis again. Patients who have suffered from Scarlet fever should have the skin protected by flannel for some time, for there is probably no doubt but that exposure to cold *may* be a sufficient cause for the appearance of this acute diffuse nephritis or acute desquamative nephritis, or acute Bright's disease. Frerichs expresses the opinion that "anasarca is produced by exposure to cold during the period of desquamation."

A child, however, when well protected, had better receive the beneficial influence of fresh air, than to forego it on account of the danger of exciting this kidney trouble by such exposure. The benefit derived much more than balances the risks taken; for with ordinary care the risks are but trifling, and the benefit is immense. The desquamation from the surface of the body and from the tubes of the kidney are both ordinary phenomena belonging to the natural progress of the disease.

Progress of Medical Science.

Writer's Cramp cured by Massage and Injections of Strychnia.—It is claimed by Rossander that the rational treatment of this disease requires an accurate study of each case, for it will be found that in many cases we can discover the cause. Our principal difficulty thus far has been, that writers on the subject have concealed their ignorance of the true nature of the disease by using terms such as "co-ordinating functional neuroses," etc., which convey no real notion of the *materies morbi*. What we really need to know is, whether the disease is of peripheral or of central origin, and, in the former case, whether it arises from a muscular paresis, or from too great irritability of certain groups of muscles or nerves, and whether there may not be various forms and combinations of these in different cases. Some of the older and more severe cases, when traced to their source, are found to arise from very slight causes that may be easily removed; but which, if allowed to operate unchecked, will give rise to other and more serious complications. When we remember the number of small muscles of the hand that are concerned in writing, we realize the difficulty of detecting which muscle is at fault; and yet the mighty train of symptoms may sometimes be traced back from one or other of the small muscles of the hand to the gray substance of the cord. In some cases, where one set of muscles is too strong for the opposing set, the disease might be compared to muscular asthenopia of the eye.

The following case is introduced, as it shows the characteristics of the disease and the mode adopted for its relief:

A clerk, 32 years of age, of good physique, and in other respects healthy, had noticed the first signs of the cramp about three years previously. At that time he began to notice a difficulty in writing, great fatigue after an hour, and soon total inability to form a letter. The pen could be held as well as ever; perpendicular lines could be drawn; but it was impossible to form letters, or to direct the hand to the ulnar side. At every attempt to do this, the hand was drawn upwards. These movements continued to increase in violence, until at last, at any attempt to write, the hand was forcibly jerked into the air. It occasioned him no pain.

This condition of things lasted two years, during which time he was quite unable to write, and especially if any one were looking at him. At the examination,

the hand and arm were found of normal strength, and the grasp of his hand was unaffected. All other motions were normal. He could hold the pen, and even place it on the paper without difficulty; but any attempt to form letters caused the above-mentioned movements. The treatment consisted of massage twice a day. Energetic friction was applied over all the muscles of the hand, and in addition, a small wooden cylinder was used to beat the muscles of the little finger and thumb, together with those of the forearm, particularly the pronators and flexors, and the flexor carpulnaris. The muscles of the palm contracted at the commencement when they were struck, though not with much force, but the abductor digiti minimi did not react at all. Injections of 10–12 drops of nitrate of strychnia (1 : 100) were then made daily into the forearm. An improvement was noticed after the first week; this gradually increased, and soon the patient commenced to write a little. After four weeks of treatment the cure was complete.—*Hygeia*, Stockholm, July, 1873.

Jaeger's New Incision in the Extraction of Cataract.—Linear incisions are defined by Jaeger as those only which fall throughout their entire length in the planes of one or more ocular meridians. If the surfaces of the wound be so situated as to intersect the planes of several meridians, no one of which traverses its whole length, the result is a flap incision. Again, he divides the linear incisions into complete and partial, according as the wound corresponds to one or more meridional planes, that is, as the canal of the wound is perpendicular or oblique to the surface of the bulb.

The difficulty of making linear incisions according to the above definition with the instruments in use, led Jaeger, in operating for cataract-extraction, to the adoption of the following modifications:

In 1845–6, with a concave-shaped lance eleven millimetres broad, the concave side being directed backwards, he made incisions into the outer segment of the cornea through which cataracts of considerable size could be extracted. However, as this incision did not suffice for the extraction of full-sized senile cataracts, he modified the operation by locating the incision in the sclerotic. He had concave lances constructed of from eight to sixteen mm. radius on the inner concave surface, and of from ten to thirteen millimetres breadth, and bent at an angle from 20° to 30° to the handle. The concave surface was directed backwards, and from the outer and upper border of the cornea an incision was made, parallel with the plane of the iris, into the anterior chamber. The incision fell for the most part in the sclerotic, and had an extent of from nine to eleven millimetres or more. He pursued this method for a considerable time, but in the end, finding that the results thereby obtained were no better than after the old flap extraction, especially when the latter was combined with iridectomy, he abandoned it entirely. From 1865 to 1868 he performed a large number of extractions according to Graefe's method, but his conclusion was that this also had no advantage over the flap extraction with iridectomy.

Quite recently Jaeger has adopted still another method. He has sought to construct a knife whose form should be the best calculated to effect the desired linear incision. The instrument is triangular, resembling in general Beers' knife, but considerably narrower. The length of the blade is 33 to 35 mm., the greatest breadth 5½ to 6½ mm. The back of the blade is blunt, but so thin as to fit exactly in the angle of the wound. The edge is bow-shaped or elliptical. The surface of the blade is curved cylindrically, the axis of the cylinder being parallel to the back of the blade. The front concave surface has a radius of 6 or 7 mm., the posterior convex surface about 5 mm. radius. With this instrument it is claimed that, according as the surface of the blade is inclined to the given meridional plane, a flap incision directed either forwards or backwards, or a perfectly linear incision, can be made as it may be desired. In distinction from other linear incisions, Jaeger has named the one made thus the concave incision (Der Hohlschnitt).

He describes his operation as follows: "The patient is placed either in the sitting or reclining posture; the lids are best kept apart by a simple holder which depresses the lower lid, or, in very restless patients, the double speculum is used; the bulb is fixed by the operator who grasps a fold of the conjunctiva below the lower edge of the cornea with a blunt notched pincette.

"I place the knife already described, with its concavity directed forwards, its edge upwards, parallel with the plane of the iris as to its length, and, as to its surface, inclined at an angle of from 35° to 40° to the same, and pass it, turning it slightly forwards in a direction corresponding to the curve of its blade, or, where possible, keeping it unaltered in a line corresponding to its back through the upper portion of the anterior chamber. Having made the puncture and counter-puncture, the bulb is no longer fixed by the pincette, but in proportion as the bulb tends to roll upwards, counter-pressure is made with the back of the knife. . . . ."

The advantages of this mode of extraction, it is claimed, consist:

1. In the production of the most complete linear wound possible, of a size sufficient for the largest cataract.

2. In the possibility of fixing the bulb as desired during the whole operation.

3. *In the more or less total retention of the aqueous fluid until the completion of the incision.*

4. In the relatively slight increase of the intra-ocular pressure during the accomplishment of the incision.

5. In the relatively easy escape of the cataract.

6. In subjecting the patient to an after-treatment neither very tedious nor exhausting.—*Allg. Wien. Med. Ztg.*, 1873, 27, 28, 29, 30, 31.

Treatment of Scabies.—Dr. Caspari believes that styrax has many advantages over other remedies in the treatment of this disease. In his experience he has found it pretty reliable. It occasions no burning of the skin, and no unpleasant feeling; it has no disagreeable smell, and seems to be more lasting in its effects than anything he has heretofore employed. To obtain the best results, he recommends that liquid styrax should be made up into a liniment with alcohol and oil. Every part of the body should be rubbed with it, the unaffected as well as the affected parts. To insure complete success this treatment should be repeated at least three times. A large quantity will necessarily be used, and if this be an important consideration it may be better to employ carbolic acid, which is far cheaper and effectual, though it requires to be repeated more frequently and for a longer time. A wash may be made of it, in the proportion of one drachm of the acid to a pound of water, or an ointment, of a drachm to the four ounces of lard. The diseased parts should be rubbed vigorously three times a day. In from two to three days the scabies will disappear, and any eczema which remains will yield rapidly to the same treatment. It has an advantage over styrax that it need only be applied at the seat of

the trouble.—*Deutsch. Klin. Allg. Med. Central Ztg.*, 82, 1873.

Neuropathic Origin of Diabetes Insipidus.—So many cases of this form of diabetes have been found to have a distinct causal connection with some nerve lesion, that it is interesting to be able to add three new cases furnished by Mosler. The first was a boy, seven years old, who had survived an attack of epidemic cerebro-spinal meningitis, and developed the symptoms of diabetes insipidus during his convalescence. The disease continued unchecked for years, though he underwent protracted hospital treatment. In the second case the attack followed immediately after a fall upon the head, and at the time of observation the disease had lasted fourteen years. While suffering from diabetes these two cases had no nervous symptoms. The condition of the two patients was materially bettered by the use of acetate of lead and opium, both in large doses.

In the third case the affection seemed to be connected with a syphilitic lesion of the brain, which had occasioned other nervous symptoms, such as convulsions and hemiplegia. This was shown by post-mortem examination, when areas of softening were found in the left hemisphere, medulla, and pons.—*Virchow's Archiv, Berl. Klin. Woch.*, 40, 1873.

Ostitis Deformans.—This name is proposed by Professor Czerny, of Freiburg, for a local affection of the bones which he believes to be exceedingly rare, and has not heretofore been described as a distinct disease by medical writers. Thus far he has personally known of but two cases, of which he gives the following histories: The first was a man, twenty-two years of age, who had served during the late war, and had experienced severe hardships from long marches and exposure to inclement weather. At that time he began to feel occasional pain in his leg, but the symptoms yielded under appropriate treatment. When he first came under observation there was pain and swelling over both malleoli. The foot, too, was less arched than its fellow, and commencing flat-foot was suspected. Rest and moist applications relieved the trouble, and he was discharged after he had been fitted with a supporting shoe (Stromeyer's). He returned, however, in a week, complaining of pain in the tibia at a point higher up. The pain increased, and when he was next seen the lower part of the leg was considerably swollen and painful, and bent somewhat backwards and outwards. A splint of plaster-of-Paris was applied, and tincture of iodine was used locally.

The pain diminished and the patient was discharged again, this time wearing a liquid glass splint. About six months later, when he was seen again, the swelling had entirely subsided, and now it was clear that the leg was permanently bent as before described. There was no pain in the bones, however, and they were quite firm and unyielding. The patient used the limb, depending somewhat upon the use of a stick, as his foot was slightly in the equino-valgus position.

The second case was a woman of pale, anæmic appearance, who had borne three children. She was suffering from periostitis of the ulna, for which she wanted relief. Her left leg showed the same deformity as in the first case described. She suffered no inconvenience from it at that time, but said that from the time she was eight years old, until sixteen she had pain at the point of curvature. At that time it began to bend, and she sought advice. Her trouble continued until her twenty-fourth year, when she was able to walk, and since that time she had not suffered any pain or weakness in the part. A number of somewhat similar cases have been recorded, but they are more properly either cases of senile osteoparesis or rarefying ostitis of the sternum or skull, the latter of which are always fatal. There is also another affection, the rickets of adults, which is simply a postponement of the rickets of children, while in these cases that are presented, the bones that had already received their earthy salts lost them and became soft and flexible, but subsequently regained their usual hardness. In these cases, too, the process was purely local, while in rickets it is general.

In all the cases that Professor Czerny was able to collect, in which the prominent symptoms coincided with his own, the patients recovered after a longer or shorter orthopædic treatment—that is, by rest and position.—*Wien. Med. Woch.*, 39, 1873.

Causes which Induce Cessation of the Menses.—From the statistics which were furnished by the histories of 400 patients, who had passed the climacteric years of life, Dr. Colnstein, of Berlin, has been put in the possession of some important facts, which he has tabulated as follows:

1. The duration of the menstrual function varied between 10 and 44 years; the larger proportion menstruated for a period varying between 28 and 34 years, of which the average, consequently, was 31 years.

2. In 76 per cent. of the cases cessation came on with precursory symptoms; in 24 per cent., or the remainder of the cases, it occurred suddenly. The causes which produced a sudden arrest were such as are usually given, viz.: mental excitement, physical shock, exhausting parturition, abortion, and severe attacks of illness. If the first pregnancy occurred between the 36th and 46th years, it was not uncommon for menstruation to cease, and not recur, even if the labor were normal.

Certain facts are also alluded to by the author which influence the early or late appearance of the menopause.

1. The date of the first menstruation is important, for those who menstruated early (before 14 years of age) continued to menstruate 3 years longer than the average; while, on the other hand, those who began to menstruate later (at 18 years of age and after) ceased menstruating 3 years before the average.

2. The regularity or irregularity of the duration or recurrence of the periods was no indication of an early or late cessation.

3. Marriage exerted a very decided influence. It was found that 15.5 per cent. of the married women continued to menstruate for a period varying between 29 and 34 years, while only 9 per cent. of the unmarried menstruated for an equal number of years.

4. The continuance of uterine activity seemed to depend on the number of births, for those women, whose menstrual functions lasted from 26 to 32 years, had invariably borne more than 3 children.

5. The date of the last delivery was also an important element. If this occurred between the ages of 38 and 42, and was at term, then the menopause occurred between the 24th and 32d year of menstruation; if, however, it fell between the 20th and 38th years, the menopause came between the 25th and 28th year of menstruation. If the last delivery was before term, then cessation often came on without much warning.

6. Lactation was found to be another important factor. In 40 women who had not nursed their children, the average duration of the menses was four years below the mean. From these data it was inferred that the longest continuance of the menses will occur in women who have menstruated early, have

married, have borne more than 3 children, have been delivered at term, between the ages of 38 and 42, and have nursed their children themselves.—*Deutsch Klin., Schmidt's Jahrb.*, 6, 1873.

Changes which the Sympathetic Nerve undergoes in Constitutional Syphilis.—To discover the special lesions of the sympathetic nerve in syphilis, Petrow has made a careful study of twelve cases which came under his own observation. His attention was mainly directed to the cervical, thoracic, and solar plexuses. He sums up the results of his observations as follows:

1. General syphilitic infection of the system manifests itself in the sympathetic system by changes in the nervous elements and in the interstitial connective tissue.

2. The nerve cells, aside from any change in the interstitial tissue, become pigmented and undergo what he calls a colloid degeneration.

3. The excessive production of connective tissue in various organs of the body, which is the peculiar lesion of syphilis, is accompanied by a similar growth in the nerves themselves, and causes atrophy of the nerve fibres and cells.

4. The endothelium surrounding the cells is affected in a similar manner to the cells. At first, the cells increase in size and proliferate, subsequently they undergo a retrogressive fatty metamorphosis.—*Virchow's Archiv, Schmidt's Jahrb.*, 6, 1873.

Treatment of Lupus Vulgaris and Lupus Erythematosus.—Dr. Veiel, of Constatt, has been in the habit of treating these obstinate affections by scarifying the surface, somewhat in the way that Volkmann has recommended, that is, by puncturing the surface of the patches in numerous places, after which he applies a solution containing equal parts of the chloride of zinc and alcohol. The result of this application is, that suppuration takes place at the points of puncture, and then scabs form, which usually fall off after eight or ten days. The same treatment must be repeated until a smooth, shining scar has formed; and then the result is to be regarded as satisfactory. From five to eight applications are usually sufficient. In common lupus the treatment may require a longer time, because the caustic will necessarily produce extensive ulcers that will require a long time to heal. The patients should, at the same time, be put upon the internal use of cod-liver oil and arsenic. Salt-water baths should also be employed. In performing the operation by puncture, Dr. Veiel makes use of six or more lancets, which are so combined together as to constitute a single instrument. In this way less time will be consumed and a great deal of pain will be saved.—*Arch. f. Derm. u. Syph., Schmidt's Jahrb.*, 6, 1873.

Impossibility of making a Differential Diagnosis between Cerebral Embolism and Cerebral Apoplexy.—To illustrate the uncertainty of making a positive diagnosis between these affections, Schmidt mentions two cases which occurred at the clinique in Erlanger. Two women of advanced age were attacked with all the symptoms which are usually ascribed to cerebral apoplexy. The arterial walls were rigid, there was hemiplegia, absence of heart lesions that could be detected, and unconsciousness lasting two days. In one of the cases post-mortem examination showed a slight stenosis of the mitral valve, and embolism of the artery of the right fissure of Sylvius. In the other there was a thrombus in the right carotid, just at the point where it enters the cranium, and sclerosis of the cerebral arteries.—*Deutsch. Arch. f. Klin. Med., Schmidt's Jahrb.*, 6, 1873.

Aphthous Stomatitis from Drinking Cow's Milk.—Dr. C. Van Parys relates a case in which a man who drank some fresh cow's milk was seized shortly after with vertigo, colic, vomiting, and obstinate diarrhœa. Subsequently severe pains in his throat and coughing set in, and he found it difficult to swallow. On examining the cavity of the mouth numerous vesicles and ulcerated points were found along the alveolar border of the lower jaw and on the inner surface of the under lip. The pharynx appeared unchanged. On the right thumb there were blisters, as well as on the inner surface of the left hand, between the fingers and toes, and in the folds of the elbows, and about the perineum, scrotum, and penis. These symptoms were regarded as analogous to the stomatitis aphthosa of cattle. On the morning of the attack the patient had taken freely of fresh unboiled milk from a cow that had the disease. Similar cases are mentioned, and it is stated that in Holland the milk of such cows is strictly prohibited. It was interesting to know that other members of the patient's family drank the milk of the same cow, taking care to have it boiled, and suffered no harm. It is recommended during an epidemic of this kind, to be careful and boil the milk before using it.—*Journ. de Brux., Schmidt's Jahrb.*, 6, 1873.

Metallic Mercury in Obstinate Constipation.—Two cases have recently been reported which revive an old-fashioned notion as to the value of this metal in overcoming obstructions of the bowels. The last case was in the practice of Dr. Kirschstein, who narrates the history as follows: A fisherman of vigorous habits, who had suffered from frequent attacks of abdominal pain, found that he was becoming gradually more and more constipated, until at length his bowels would no longer move, and he was seized with vomiting, tympanitis, and other alarming symptoms. After five days of ineffectual efforts to relieve him, the physicians, who had exhausted the stock of remedies usually relied on in these cases, finally decided to give metallic mercury as a *dernier ressort*. His case was regarded as hopeless, and death was anticipated in a few hours. At eight o'clock in the evening a tablespoonful of the metal was given, and was followed half an hour later by a similar dose. Shortly after the second dose the vomiting ceased, the patient became calm, and towards morning there was a discharge of hardened fæces. No further remedies were given, and the patient was soon able to resume his work. His passages became entirely regular; but for a period of three weeks he passed almost daily larger or smaller quantities of quicksilver.—*Berl. Klin. Woch.*, 37, 1873.

Discovery of a Paleolithic Skeleton.—Mons. Emile Rivière recently discovered in a cavern at Mentone, Italy, a fossil human skeleton of the paleolithic epoch. The attitude was one of repose, as if death had overtaken a man during sleep. It is believed that the stature of the fossil man can be estimated at the lowest at six feet. The skeleton, which no more resembles that of an ape than does a modern skeleton, presents some contradictory characteristics of inferiority and paleolithic antiquity, such as a marked dolicocephalic type, great stature, increased length of the radius relatively to the humerus (10 : 13½ inches), a platycnemic tibia; and, on the other hand, marks of superiority, viz., a forehead neither low, retreating, nor narrow; an absence of prognathism, and a facial angle of nearly 85 degrees.

The skeleton lies in the Anthropological Gallery of the Museum of Natural History, Paris, awaiting the judgment of leading anthropologists as to the significance of the discovery.

ARTICLES IN OUR EXCHANGES.

ANATOMY AND PHYSIOLOGY.

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Diapedesis (migration of red and white corpuscles through the walls of capillary vessels). ARNOLD. *Virchow's Archiv*, Sept., 1873.

Varicose hypertrophy of the nerve-fibres of the brain. ROTH. *Ibid.*

Varicose axis cylinders in the central nerve system. OBERMEIER. *Ibid.*

Double generative organs in a female. CASTILLO DE PINEGRO. *El Anfit. Anat.*, 17, 1873.

SURGERY.

The elastic ligature. DITTEL. *Allg. Wien. Med. Ztg.*, 29, 30, 1873.

PATHOLOGY AND PRACTICE OF MEDICINE.

Mediastinal pericarditis and the pulse accompanying it. KUSSMAUL. *Berl. Klin. Woch.*, 37, 38, 1873.

Treatment of cholera and prevention of the cholera typhoid. HODDICK. *Ibid.*

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Diagnostic significance of the crepitant sound produced by percussion. CHOMJAKOW. *Ibid.*, 38, 1873.

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New formation of brain tissue in the form of tumors in the convolutions of the brain. SIMON. *Ibid.*

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Case of pregnancy in a rudimentary horn of the uterus. JAENSCH. *Virchow's Archiv*, Sept., 1873.

Pathological anatomy of spinal infantile paralysis. ROTH. *Ibid.*

Urinary calculi in children, with reference to 192 calculi in the Museum of the Pauper Children's Hospital in Pesth. NEUPAUER. *Jahrb. f. Kinderhlk.*, vi., 4, 1873.

Cure of true croup without emetics. KLEMM. *Ibid.*

Case of congenital occlusion of the duodenum. HILMPEL. *Ibid.*

Meningitis basilaris—recovery. FLEISCHMANN. *Ibid.*

Etiology of pemphigus neonatorum. KOCH. *Ibid.*

Treatment of scrofula by change of climate. KNAUTHE. *Ibid.*

Cæsarean section—mother and child saved. STIEGELE. *Med. Corr.-blatt*, 31, 1873.

Myoma lævicellulare of the right nipple. SOKOLOW. *Ibid.*

Serious results from swallowing foreign bodies. RAYSS. *Ibid.*

Serous cyst with ricciform granules. HERRERO OCHOA. *El Anfit. Anat.*, 17, 1873.

Yellow fever (continued). CARBÓ Y VALLES. *Ibid.*

Aneurism of the innominatus. WINGE. *Ibid.*

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THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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

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THE MEDICAL CHARITY QUESTION.

THE medical charity question is still open for discussion, and we are willing that it shall be so long as any new ideas are elicited or new suggestions made. In another column we have letters bearing upon the subject—one in particular referring to the relation of medical charity to the clerical profession—which deserves attention. Our correspondent, who seems to be more than usually favored with ministerial patronage, is inclined to look at the matter in the practical light of a man of business who is seeking some explanation for acts which have been sanctioned by a time-honored custom, and which he in common with others of the profession are expected to perform whenever called upon.

As far as this particular question of gratuitous services is concerned it resolves itself into one of courtesy, of sympathy for a class of gentlemen whose lives are spent in self-sacrifice for the good of others. The custom, doubtless, dates as far back as the time of the Apostles, and is, in the main, a good one; one which does honor to our hearts and consciences. There may be exceptions to the general application of the accepted rule, but these are certainly very few indeed, not enough in themselves to have any particular weight as militating against the general practice.

As a rule, clergymen have small incomes, relatively much smaller than physicians of corresponding standing in their profession. They have a better start in life than physicians, but they are proportionately longer at a standstill when they arrive at a point of barely living.

Again: they do not ask our services for nothing, but that should not relieve us of our self-imposed obligations. If our correspondent finds his clerical charity a burden, he has only himself to blame for forcing himself to do what he believes to be wrong. We are understood now to speak on general principles, and from such a standpoint to sanction the custom. If a physician be very poor, and the clergyman very rich, the case is altered, in a pecuniary sense at least, and charges should be made. We do not think that there would be any objection to paying bills under these circumstances—no more objections than there should be for charging a fee.

Our correspondent has never heard of a clergyman refusing a fee. If a physician refuses a fee when he can get it, he can certainly learn a useful lesson from the minister. We should like to see what would be the result if our correspondent should be offered a fee by one of his five clerical patients. If he should refuse, it would not be because he thought it wrong to do so.

We bestow our charities upon the ministry for two very good reasons, which we cannot conscientiously offset by a merely pecuniary consideration. First, they are gentlemen whose pay, in a general sense, bears no comparison to their work, making them as a class relatively poor. Secondly, we should take a particular gratification in extending professional aid to such active and efficient co-workers in the cause of humanity and suffering.

Another correspondent speaks of the evil of large charges to the poor on the part of the apothecaries. This is one which every one can appreciate. The remedies suggested are good in the main, and for the want of any better which at present occur to us, we commend them to the consideration of all concerned. The class of poor to which particular reference is made by our correspondent is not that which should be treated at our dispensaries, but such as are able and willing to pay the physician a modest fee.

In the interests of charity and in justice to the "struggling practitioner" this class too should have every encouragement to follow out their wishes. We should like to have some suggestions from the pharmacists upon this point.

THE TRANSACTIONS OF THE STATE SOCIETY.

IT will be remembered that the State Legislature refused to make an appropriation for the publication of the Transactions of the State Society for the present year, and that the Medical Society of this county some time ago voted to pay its share towards the expense of the same, provided that the State Society should act independently in the matter. It is high time that the other societies in the county should follow the example of our own, so that some definite plan can be decided upon, and the volume be published before the next annual meeting. The Committee on Publication do not wish to take the responsibility of issuing the volume unless they have the

necessary pecuniary support. This latter is all that is needed, and it is to be hoped that the county societies throughout the State will not be backward in the expression of their opinion upon the subject.

DAMAGES FOR VACCINATION.

A CASE recently came up for adjudication in the courts which has something of a medical interest attached to it.

In July, 1871, when the small-pox prevailed to an unusual extent in this city, and there was fear of it becoming an epidemic, the Board of Health detailed certain surgeons to vaccinate throughout the city all who had not been vaccinated. Dr. Brown, one of such surgeons, vaccinated Alice E. Hallowell, then four years old. It is claimed that through such vaccination she was inoculated with scrofula, and a suit was accordingly brought by the father of the girl against the city to recover $10,000 damages. The testimony for the father showed that he had forbidden his wife to let the child be vaccinated by any public physician, but that Dr. Brown disregarded this injunction and insisted on the vaccination. Several physicians also testified that scrofula, syphilis, and various other diseases might be imparted through the use of improper vaccine matter. At the close of the testimony for the plaintiff, a motion was made by the defence to dismiss the complaint, and the same was argued at considerable length. It was urged that the Doctor exceeded his authority, but the main point insisted upon was, that the city was not liable in the case, inasmuch as the Board of Health under the present laws was distinct from the city government. Judge Van Brunt took this view of the case, and dismissed the complaint.

In times of threatened epidemic, when great numbers are in danger, it is eminently proper to reduce this danger to the minimum, and any interference with the exercise of such duty is reprehensible if not punishable. For the performance of such obligation to a commonwealth the law provides by giving the necessary discretionary powers to Health Boards. In the case before us there seems to have been unusual danger of an epidemic, and the order of the Board to its assistants, to use every means to prevent such an occurrence, was eminently proper. Whether there was any justification on the part of the physician in this particular instance in setting aside the express wishes of the father of the girl is questionable. The parent certainly had a right to choose his own physician to vaccinate his child; all that was necessary on the part of the representative of the Health authorities, was to be satisfied that the said vaccination should be performed in a certain time. By forcing his services upon the family he certainly, under the circumstances, exceeded his authority.

As to the damages from the vaccination, if they were confined to the possibility of proving the inoculation of scrofula, they could not be sustained by any substantiated scientific data. The danger of inoculation of syphilis is, we believe, generally admitted when any of the blood of the infected person is mixed with the vaccine lymph, but beyond this we cannot go.

THE COMMITTEES ON HYGIENE AND THE COUNTY SOCIETIES.

IN our report of the last meeting of the Medical Society of the County of New York, there appears a circular from the Secretary, DR. W. H. BAILEY, directing the attention of the Committees of Hygiene of the several County Societies to certain questions propounded by the Central Committee at Albany. These questions are certainly very important ones, and as such should be discussed by all parties interested.

We should like to see all the necessary information forthcoming, but it strikes us that the proper method has not yet been found to obtain it. There is altogether too much of the elements of self-consciousness and presumption in the suggestions to the small committees, to expect much in the shape of the necessary co-operation—in fact, too much of the committee about it, and too little of the County Societies. We should like to know if any Committee on Hygiene, of any County Society, has a right to communicate directly to a central committee, without the sanction of the County Society. If so, how can the central committee pretend to present in their annual report anything more than the opinions of certain gentlemen who happen to be on these committees? Altogether, the information sought to be collected appears to have for its object the glorification of certain gentlemen who assume to cultivate Hygiene as a business rather than as a strictly scientific study.

Reviews and Notices of Books.

THE CEREBRAL CONVOLUTIONS OF MAN, represented according to Original Observations, especially upon their Development in the Fœtus. Intended for the use of Physicians. By ALEXANDER ECKER, Professor of Anatomy and comparative Anatomy in the University of Freiburg, Baden. Translated by ROBERT T. EDES, M.D. New York: D. Appleton & Co. 1873.

THERE has been an increasing demand of late years to have the descriptive anatomy of the external brain-markings put upon a sound and definite basis. This want has been specially felt by physiologists and pathologists, but thus far they have been unable to unite upon a basis that was acceptable to all, and in consequence the entire subject is involved in the greatest confusion. In this little volume of 87 pages, lying before us, the author has established some sort of order, and he has given us a new map of the fissures, convolutions, and sulci, which is claimed to be both scientific and practical.

In adopting this course he finds himself called upon to make a new nomenclature. His reasons for so do-

ing are, that his classification is a new one, having reference rather to the fœtal development of the brain than to its mature condition in adult life.

He regards the fissures as the most important landmarks, and starts from them in his description. The convolutions are named from their relation in position to the fissures. He mentions three kinds of convolutions: chief, primary, or first; subordinate, or second, and finally, tertiary. The chief or primary he compares to great mountain chains; the second to subordinate ranges, separated by longitudinal valleys; and the third to mountain ridges running off right and left from the greater chains. The fissures are also subdivided into three principal classes.

If we could hope that anatomists in general would be satisfied with this classification, we should certainly have gained a great deal; but it really looks as if the book were only an addition to the confused notions already existing, and the physician will be no better able to find his whereabouts in this most perplexing labyrinth than before. The author concludes the book by giving his method for making a systematic examination of the brain-exterior. This is really useful. The methods he employs for preserving and preparing his specimens are hardly detailed enough for practical use. The translation is smooth and free from Germanisms. The plates are clear and sufficiently numerous.

An Introduction to the Study of Practical Histology. For Beginners in Microscopy. By James Tyson, M.D. Philadelphia: J. B. Lippincott & Co. 12mo, 50 pp. 1873.

This essay is a slightly altered reprint from the *Philadelphia Med. Times*. It is intended to serve as an *introduction* to the study of practical histology. We do not think that the technology of the microscope could be more thoroughly exposed in an equal space than has been done in this little treatise. The methods here given for examining the blood and connective tissue are especially interesting.

A Practical Treatise on the Diseases of the Ear, Including the Anatomy of the Organ. By D. B. St. John Roosa, M.A., M.D., Professor of Diseases of the Eye and Ear in the University of the City of New York, etc., etc. Illustrated by wood engravings and chromo-lithographs. New York: Wm. Wood & Co. 1873. 535 pp. 8vo.

Lectures on Diseases and Injuries of the Ear, Delivered at St. George's Hospital. By W. B. Dalby, F.R.C.S., M.B. Cantab., Aural Surgeon to the Hospital. With twenty-one Illustrations. Philadelphia: Lindsay & Blakiston, 1873. 228 pp. 12mo.

According to the last census there are in the United States sixteen thousand two hundred and five deaf-mutes. Probably in much more than half of these cases the deafness is acquired, and this large percentage is in great measure due to the ignorance which prevails in the profession with regard to otology. Many ears are irreparably damaged by processes of disease which are readily checked by appropriate treatment at their commencement. Many of these diseases are caused by, or associated with, various affections of the general system. This is especially true of the diseases with which young children are affected; such as the exanthemata, pneumonia, coryza, etc. If either of the books above mentioned could receive a few hours' study from every medical man in the land, a great benefit would result to humanity. As Prof. Roosa says in his introductory chapter: "It is to be feared that even now many wise and skilful men do not know that to drop stimulating or even anodyne applications upon a membrane which they have never examined, to probe an ear for wax which they cannot see, are purely empirical practices which every conscientious physician should hold in abhorrence."

This introductory chapter contains a very complete and interesting sketch of the progress of otology from the time of Hippocrates to our own day. The authority of Galen appears to have remained almost absolute for 1,300 years. This want of progress is here very properly ascribed to the absence of scepticism peculiar to those ages. Though light began to dawn in Valsalva's time, it is only within the last few years that this branch of medicine has approached its present high rank.

The anatomy of the ear is in great measure condensed from Henle, and is as explicit as could be expected, considering the space thus occupied. Most of the cuts illustrating this subject are copied from Henle and Rüdinger. In the second chapter, fourteen pages are devoted to the anatomy of the auricle and the external auditory canal. In chapter third, the methods for examining aural patients are given. Among the methods for registering the hearing power, that of Prout is recommended as the best. The distance is usually expressed in inches as a fraction, the numerator being the distance at which the particular sound is heard by the patient, and the denominator that at which it should be heard by a normal ear. Although mention is made of rhinoscopy as an aid to diagnosis, it does not receive the attention which its importance demands, only three pages being devoted to this subject. Prof. Roosa does not lay very much stress on the advantages of the diagnostic tube, although Kramer was of the opinion that the sounds heard are more clear and distinct than those heard with the stethoscope in diagnosing respiratory diseases. The appearances presented by the membrane after the inflation give much more reliable information. As an example of the loosely constructed sentences which now and then occur in this book, we might refer to the one on page 98, where it is stated, in describing Politzer's method, that the surgeon places an air-bag into one of the nostrils. The importance of Politzer's and Valsalva's methods of inflating the ear is acknowledged, and at the same time the evils resulting from the injudicious use of these procedures are also pointed out. Affections of the auricle are, for the most part, relegated to works on general surgery. Othæmatomata are, however, well discussed, though there is not much said about the treatment.

The remainder of the first part of the book—from the fifth to the eighth chapters inclusive—is devoted to the external auditory canal. The injurious effects of improper poulticing, auriculaves, etc., are pointed out, and many useful suggestions for maintaining the health of this part are given. Inasmuch as the external auditory canal is lined by epidermis, and not by mucous membrane, it is improper to speak of a catarrhal inflammation of this part, as is done by some authors. Parasitic otitis is considered not to be a primary disease, but a consequence of diffuse otitis. The formation of a vegetable fungus in the ear is usually preceded by eczema. The histology of aspergillus is illustrated by three original engravings. The cases occurred in Dr. Roosa's practice. Warm water is recommended as the only parasiticide necessary. We think, however, that something stronger will sometimes be found necessary.

Syphilitic affections of the auditory canal are considered to be very rare, though the modifying action of syphilis on other local diseases is not denied. The seventh chapter is occupied with the consideration of inspissated cerumen. This is not so common an affection

as the records of many of our public institutions would lead one to suppose. The cases thus recorded are often only impacted cerumen, or the thickening is due to some other disease of the parts. "A vigorous syringing, or worse still, probing, in order to *see* if the wax be not hardened," is considered a bad practice. Chapter eighth is devoted to foreign bodies in the ear. The employment of instruments for their removal is condemned, at least until syringing has proved unavailing. Even the latter should not be resorted to until the presence of the body has been ascertained with the otoscope.

Part second—comprising chapters nine to seventeen, inclusive—treats of the middle ear, including the membrana tympani. This portion of the ear is affected in a large majority of the aural diseases. Its anatomy is therefore very important. Forty pages are devoted to a very lucid, though condensed account of so much of the anatomy as is indispensable for a correct appreciation of the diseases which occur here. Chapter tenth treats of injuries of the membrana tympani. Independent or primary myringitis probably does not occur, though it is alluded to by some writers. This will be readily appreciated when we consider the anatomical structure of the membrane, two of the three layers of which it is composed being direct continuations of adjacent parts. Its vascular and nervous supplies also show that its inflammations must be of a secondary nature.

The effect of condensed air is ably discussed. Recent engineering enterprise in laying foundations for bridge-piers, has furnished opportunities for collecting valuable information on this subject. Chapter eleventh treats of acute and subacute catarrhal inflammation of the middle ear. There are very few persons who have not suffered from "earache," the popular name for acute catarrh of the middle ear. As it is very rarely treated by physicians, it is often allowed to run on to suppuration of the membrana tympani, myringitis, etc.; indeed many practitioners even encourage suppuration, believing it to be a salutary process. The information contained in this chapter is especially valuable to those who treat diseases of children.

In otitis media hemorrhagica, the inflammation of the lining membrane of the middle ear assumes such a rapid and violent course, that there is not only an exudation through the walls of the vessels, but the walls themselves actually break down, and the cavity becomes so distended with blood that the drum-head almost necessarily bursts. Hemorrhage into the tympanic cavity also occurs in Bright's disease; we should therefore be on our guard for renal disease when treating these hemorrhages.

Chronic non-suppurative inflammation of the middle ear and the affections of the labyrinth are the most intractable of the aural diseases. Nearly half the cases seen in private practice are of the former class. The nasal douche is very properly condemned, and very conclusive evidence is brought forward in support of this opinion. Bougies are not very highly recommended; they can almost always be replaced by the catheter or Politzer's method. The value of electricity for the treatment of aural diseases has probably been overestimated by many. The cases in which it has proved most beneficial are quite as amenable to the catheter, Politzer, and pharyngeal applications. Paracentitis is not considered a dangerous or painful operation. Its chief value is in furnishing a means of treating the lining of the middle ear, and may very properly be performed in cases of chronic proliferous inflammation which still advance in spite of other treatment. Division of the tendon of the tensor tympani and of the adhesions between the membrana tympani and the walls of the cavity, deserve a trial where the symptoms of increased auricular pressure are not otherwise relieved. Angioma is here for the first time classified among the aural polypi, a case having occurred in the practice of Dr. A. H. Buck, of this city. The histology of aural polypi is illustrated by three cuts drawn from microscopic examinations of growths removed from Dr. B.'s patients. Mastoid diseases, and caries and necrosis of the temporal bone, are very thoroughly considered in the seventeenth chapter. Free incisions over the mastoid process are recommended where there are symptoms of inflammation of this part, and the propriety of trephining the process to give free exit to pus is regarded as fully established. This chapter concludes with a table of forty cases "showing the course and symptoms of cases of meningitis, cerebral abscess and pyæmia, resulting from aural disease." This table is well worth the study of those physicians who do not realize the grave importance of the careful consideration of an ulcerated middle ear.

Part third is devoted to the internal ear. Chapter eighteen contains a very good résumé of the anatomy of this part, and the succeeding chapter treats of the diseases which occur here. A short chapter on deaf-mutism and hearing-trumpets, and several exceedingly well-executed chromo-lithographs, illustrating the healthy and diseased membrana tympani, followed by an index of authors and one of subjects, complete the book.

The value of the work is very much increased by the introduction of numerous interesting cases illustrating the various diseases. The literature of the subject is fully presented, and the bibliographical references well arranged. This will be of great assistance to any one desiring to investigate special subjects. The views and experiences of American practitioners, and the results of European researches, are presented with great impartiality and fairness. The general arrangement of the work is excellent; it is very comprehensive and thorough, with a well-elaborated system, and contains answers to all questions in spots easily found. The indications for treatment are so thoroughly stated, and their several advantages so carefully weighed, that no one need hesitate to follow the directions given. We think that all who read this book will agree with us in pronouncing it by far the best treatise which has yet appeared on disease of the ear.

Dr. Dalby has presented us with a very readable little book, which is destined to render much service in the saving of ears. The interesting style in which it is written will make it very popular among general practitioners, and it is therefore fortunate that the information which it contains is so very reliable and safe.

An abstract of these lectures appeared in *The Lancet* during 1872, but they are now presented as originally delivered, with some alterations and additions. The clinical nature of the lectures is preserved by giving an abstract of many of the cases used in illustrating them. Short abstracts of the anatomy of the external, middle, and internal ear precede the discussion of the diseases of the several parts.

AN INTRODUCTION TO PRACTICAL CHEMISTRY, INCLUDING ANALYSIS. By JOHN E. BOWMAN, F.C.S., late Prof. of Practical Chemistry in King's College, London. Edited by Chas. L. Bloxam, F.C.S. Sixth Amer. ed. Phila.: H. C. Lea. 1873.

THIS, which is a sixth American edition, is a reprint of the sixth English edition, which has just appeared.

Compared with former issues the present one has been changed, which enhances its value to the student of chemistry and maintains its reputation as a standard work. The course on qualitative analysis has been revised, especially such of it as has reference to the examination of the precipitate of hydrosulphate of ammonia. Additions have also been made to the examples for practice in quantitative analysis, and more explicit directions given to enable the student to help himself in his studies. The weights and measures for this analysis are given in French and English, giving the learner a very obvious advantage. It is unnecessary to say that the reputation of the work as a standard has long ago been established.

A Treatise on Pneumatic Aspiration of Morbid Fluid. A Medico-chirurgical Method of Diagnosis and Treatment of Cysts, Abscesses of Liver, etc. By Dr. Georges Dieulafoy, gold medallist of Hospitals of Paris. Philadelphia: J. B. Lippincott & Co. 1873.

On the 2d of November, 1869, Professor Gubler presented to the French Academy of Medicine, in the name of Dr. Georges Dieulafoy, an apparatus called an Aspirator, and a paper giving a general view of a method called aspiration. We think that facts warrant the assertion, that no innovation since the introduction of anæsthesia, has produced such a spirit of inquiry in the profession as this same means of diagnosis and treatment. We are fully aware that many have been disappointed at the results obtained by means of an agent with which they were not familiar. In many cases mishaps were occasioned by faulty instruments, and in many more by the injudicious use of good ones, and we would earnestly advise all those intending to avail themselves of the certain advantages which attach to aspiration, to study Dieulafoy's book before selecting an aspirator or using one in the investigation or treatment of disease.

The author has followed up the subject with the true ardor of a Frenchman, and has collected an amazing array of cases, considering the short period that has elapsed since its introduction. The successful as well as the unsuccessful cases are all given in detail, and are commented upon in a very able manner.

Part II.—Aspiration of the Organs—commences with a chapter on the Diagnosis and Treatment of Hydatid Cysts and Abscesses of the Liver, in which the author proves the harmlessness of the puncture where certain precautions are observed. He gives the histories of seven cases of hydatid cysts, some of which were cured by one or two aspirations, and one remarkable and rebellious case, in which three hundred aspirations and several injections were necessary to effect a cure. A remarkable feature which was observed in this case and in others referred to under the head of Aspiration of Thoracic Cavity, was the occurrence of menstruation from the lining membrane of the sac or cyst in amenorrhœal women.

Chapter II. treats of Pneumatic Aspiration in cases of retention of urine. Twenty cases are recorded requiring ninety-eight punctures, and in no case was the relief marred by accident of any kind.

Two cases of spina bifida are given. In both a cure was obtained, in the first by simple aspiration, in the second by aspiration with iodized injections.

Hydrocephalus is illustrated by the histories of five cases, with unfavorable results in all. Twenty-seven cases furnish the elements necessary for forming an opinion as to the innocuousness of aspiration in strangulated hernia; twenty cases that had resisted taxis were reduced by puncture of the intestine; four, in which aspiration failed, were subsequently relieved by kelotomy, and in these last cases it was that the harmlessness of the punctures was demonstrated; in three cases aspiration and kelotomy were followed by death.

Pericardium.—On the 28th of January, 1870, Dr. Pouroy, then dresser to the Hôtel Dieu, performed aspiration, in M. Frémy's ward, on a patient suffering from purulent pericarditis, with the happiest result. Two other cases are recorded in which aspiration afforded relief, but in both of which the patients succumbed to complications of disorders involving the thoracic viscera. We think that it will be found that eventually aspiration will find its greatest field of usefulness in the diagnosis and treatment of collections confined within the sac of the pleura. All but the special practitioners will admit that the diagnosis of such collections is not unfrequently beset with difficulties, and Dieulafoy has shown that by the simple prick of a needle all doubts are at once dispelled. No fear of wounding the lung need deter the physician or surgeon from puncturing the chest, for such wounds have been proved innocent. Successive aspirations have been made in serous, purulent, and hemorrhagic effusions, without untoward results, and injections by the aspirator have been used in a number of cases, all of which are given in detail.

Treatment of hydrarthrosis and effusions into the knee-joint are illustrated by a very large number of cases collected from various sources, and tending to prove that synovial, hematic, and purulent effusions may be removed successfully by aspiration.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Sixty-eighth Annual Meeting, October 27th, 1873.

Dr. Ellsworth Eliot, President, in the Chair.

The President presented to the Society a letter and pamphlets from Prof. Francisco Dechiara, of Palermo, recently elected an honorary member; also copies of *The Sanitarian*, the gift of Dr. A. N. Bell.

The following persons being recommended by the Committia Minora, were admitted to membership:

Garret Cosine, of East 126th street, a Graduate in Medicine at Bellevue Hosp. Med. Col. in 1868; Robert Taylor, 167 West 34th street, a Graduate in Medicine at the Long Island Hospital Col. in 1871; David Webster, 19 East 39th street, a Graduate in Medicine at Bellevue Hosp. Med. Col. in 1868; John A. Weyth, 187 Lexington avenue, a Graduate in Medicine at the University of Louisville, Ky., in 1869, and at Bellevue Hosp. Med. Col. in 1873; Adolph Brandes, 29 Market street, a Graduate in Medicine at the University of Greifswald, Germany, in 1865; Daniel Lewis, a Graduate in Med. at the Col. of Phys. and Surg. Med. Dep. of Columbia Col. in 1871; Eliza Judson, a Graduate in Medicine at the Woman's Med. Col. of Pennsylvania, at Philadelphia, in 1872; and Anna Lukens, a Graduate in Medicine at the same institution in 1870.

The President announced the death of the following members:

Adam Clarke Corson, a Graduate in Medicine at

the College of Phys. and Surg. Med. Dept. of Columbia Col. in 1866, and member of the Society since October 1th, 1869, who died at Hartford, Conn., October 10th, 1873, aged thirty-four years; SAMUEL BLOIS, a Graduate in Medicine of the Med. Dept. of the University of the State of N. Y., and a member of this Society since Oct. 13, 1828, who died on Sunday, Oct. 19, at Irvington, N. Y.

The RECORDING SECRETARY read the minutes of the Commitia Minora for the preceding year, by which it appeared that about eighty physicians had been recommended for membership in the Society.

The TREASURER made his annual report, of which the following is the substance:

	CR.	
Oct. 29, 1872.—By cash in hand		$675 92
" 27, 1873.— " initiation fees		275 00
" " " " annual dues		518 00
		$1,468 92
	DR.	
Oct. 27, 1873.—To expense account		$542 75
Balance on hand		$926 17

THE COMMITTEES ON HYGIENE AND THE CENTRAL COMMITTEE.

The PRESIDENT presented a letter and pamphlets from Dr. Francisco Dechiara, of Palermo, lately elected honorary member of the Society; and the following circular letter from the Secretary of the State Medical Society to the Medical Society of the County of New York:—

"In accordance with the recommendation of the President of the Medical Society of the State of New York, in February last, the following resolutions were adopted:—

"1. That the Standing Committee on Hygiene shall be added to, and hereafter recognized among, the Standing Committees of the Society.

"2. That the Standing Committee shall consist of seven members.

"3. That the Secretary be directed to send a circular to each County Society, urging the formation of Committees on Hygiene, to collect and discuss facts in accordance with the recommendations of the President.

"4. That the Standing Committee on Hygiene place itself in immediate correspondence with the Committees on Hygiene of the County Societies.

"The following were appointed the Standing Committee of the State Society:—

"A. N. Bell, M.D., Chairman, Brooklyn; S. O. Vanderpoel, M.D., Health Officer of the Port of New York; H. D. Didama, M.D., Syracuse; H. W. Dean, M.D., Rochester; John Ordronaux, M.D., Roslyn, L. I.; Stephen Smith, M.D., New York; C. R. Agnew, M.D., New York."

The Committee, through their Chairman, have since communicated the following:—

"After mature deliberation, correspondence, and personal intercourse, as far as practicable—covering a large field of inquiry for the future—the Committee has determined that the work of primary importance through the State is *drainage*. And to the end that as much information may be obtained on this subject as practicable, the following points of inquiry are submitted and commended to all of the County Society Committees:

"1. To what extent are the diseases of your county due to insufficient drainage?

"2. How many acres of marsh lands have you in your county?

"3. Have you intermittent diseases not attributable to marshy deposits, but to soil saturation?

"4. Are there in your county places where intermittent fever has disappeared as a result of systematic drainage of surface saturation?

"5. What system of drainage is necessary to render your county free from malarious diseases?

"The Secretary of every County Society is requested to inform the Chairman of the Standing Committee of the State Society, as soon as practicable, of the appointment of its Committee on Hygiene, and of whom it is constituted. And the Chairman of the Committee on Hygiene is requested to send the report of his Committee to the Chairman of the Standing Committee of the State Society, on or before the first day of January next, that it may be included in the report of the Committee at the annual meeting.

"In forwarding the above circular to the different societies of the State, the Secretary feels it his duty to state that he did not do it at an earlier day, because it was not definitely known whether the Transactions of the Society for 1873 would be published or not; but now, as the State has declined to publish them, and the Publishing Committee do not deem it proper for them to assume the duty, the subject will be referred to the Society at its next session.

(Signed) "WILLIAM H. BAILEY,
"*Secretary.*

"ALBANY, N. Y., *August* 18, 1873."

ELECTION OF OFFICERS.

The Society then proceeded to ballot for officers for the ensuing year, the result being as follows:—

For *President* (Drs. Sands and Thomas having withdrawn): Dr. Ellsworth Eliot; for *Vice-President*: Dr. H. B. Sands; for *Recording Secretary*: Dr. A. E. M. Purdy; for *Corresponding Secretary*: Dr. F. A. Castle; for *Treasurer*: Dr. J. E. Janvrin; for *Censors*: Drs. A. H. Smith, J. C. Peters, G. M. Smith, A. Jacobi, and H. T. Hanks; for *Delegate to the State Society* (for one year to fill a vacancy): Dr. L. De F. Woodruff.

During the counting of the ballot Dr. H. B. Sands showed to the Society a patient on whom he had successfully performed Adams' operation of "subcutaneous osteotom of the cervix femoris" for the cure of bony anchylosis of the hip-joint.

Following the announcement of the ballot the meeting adjourned to meet on the fourth Monday of November, at eight o'clock.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 8, 1873.

DR. ERSKINE MASON, PRESIDENT, in the Chair.

CANCER OF FEMALE BREAST AND ELECTROLYSIS.

DR. CROSBY exhibited a specimen of cancer of the female breast, removed the afternoon of the meeting by him from a lady aged —. She had been for a long time under the electrolytic treatment, but without benefit. The clinical interest in this case was centred in the application of electrolysis to the surface of the wound, in the hope that any remaining germs of disease might be eradicated at the same time that the healing process might be hastened. He had made it a practice in his late operations to make use of the process, and thought that good had come of it.

The tumor had not been examined microscopically, and, at the suggestion of the presenter, was referred to the committee on micro-scopy.

EPISCLERAL MELANOTIC SARCOMA.

DR. H. KNAPP exhibited an eyeball extirpated by him ten days previously. The patient, a man 45 years of age, had first noticed, six years ago, a small blackish elevation on the inner side of the sclerotic, near the cornea of his left eye. During two years it grew slowly to the size of a cherry-stone, when it was removed by the late Dr. Clavitter, of Williamsburg, N. Y. It re-pullulated, increased slowly, and was again removed two years later. A second relapse pursued the same course, and when Dr. Knapp saw the patient for the first time, about a month ago, it had reached the size of a French bean, and extended from a little below the horizontal meridian on the nasal side, upward beyond the vertical meridian, covering the upper inner half of the cornea and a somewhat larger space of the adjacent sclerotic. Its surface was blackish, smooth and lustrous, except in the centre, where it was exulcerated. Pupil, iris, size, and tension of the eyeball were normal. Sight was unimpaired, and the visual field was complete. On ophthalmoscopic examination the whole fundus was found to be in a healthy condition.

The eyeball was enucleated, and immediately after opened by a meridional section passing through the greatest thickness of the pseudoplasm. This growth originated in the superficial layers of the corneo-scleral juncture and the adjacent scleral and corneal tissues. (See accompanying figure).

Its posterior part lay loosely upon the sclerotic, from which it could be readily separated. Its anterior part was intimately connected with the cornea. Its bulk consisted of pigmented, small, spindle-shaped and roundish cells. In some places small, round, unpigmented cells were abundant. The tumor was covered by the conjunctiva, and apparently well encapsulated toward the orbit. Yet a supicious-looking, hardish, unpigmented growth made its appearance on the inner side of the orbit six days after the removal of the eyeball. It increased so rapidly that, this afternoon, the Doctor removed it with the remainder of the orbital tissue. Copious hemorrhage ensued, and was arrested only by tamponing the orbit by means of a large sponge forced into it through the palpebral fissure, while another large sponge and picked lint were pressed upon it with a tight flannel bandage. The orbital tumor consisted of unpigmented, small, round and spindle-shaped cells lying close together. The original tumor sent prolongations, in crooked passages, into the tissue of the cornea. The corneal corpuscles and their offsets were filled with roundish, small, pigmented cells, in the same manner as an intra-ocular melatroma seeks its way outward. The inner structures of the eye were unchanged.

Clinically, the specimen has a good deal of interest. Episcleral melano-sarcomata are of the rarest occurrence in ophthalmo-pathology. The Doctor had never before seen a specimen of it, either living or in anatomical collections. They are, in their nature, as malignant as the intra-ocular sarcomata, but clinically harder to deal with on account of their being less confined, and in greatly more favorable conditions of extending into the neighboring soft tissue. The earliest possible removal of these tumors, and, if there be the slightest suspicion of particles having escaped the knife, the extirpation of the eyeball and orbital tissue, are indicated without reserve, and will not be evaded by a surgeon whose energy is in keeping with the consistency of his principles in pathology.

Correspondence.

THE MEDICAL CHARITY QUESTION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—Your remarks upon medical charity and its abuses were of great interest to me. The subject is old enough, and the facts connected with it are sufficiently well established. As discussion helps us to arrive at the truth, I thought it might be relevant to glance at one part of the subject, which as yet does not seem to have been touched, and that is our charitable relations to the clerical profession.

I believe it is generally understood that clergymen are to receive advice and attendance gratis. Why this is so I cannot see unless we, as a profession, desire to respect Christianity.

In regard to this reason it is well enough, but respect for the cloth does not find bread for the physician. On my list I have no less than five clergymen's families to attend, and occasionally ride two or three miles out of my route to visit them when called upon. They represent every denomination, and practically I suppose I may be considered a thorough Christian Samaritan. It must be admitted that a great deal of time is occupied in such attendance, which for professional profit or pecuniary advancement, or rest, are virtually thrown away. When it is considered that many of these gentlemen get more than twice the salary the physician can earn, I for one cannot see why custom should sanction gratuitous services.

There are some ministers who are not able to pay the doctor, but these are comparatively few. Such no one would object to attend any more than any other needy individual, but not because he happens to be a clergyman.

Allow me to ask what we get from the minister in return for the services which custom causes them to expect for nothing. What is fair on one side is fair on the other. Did any one ever hear of a clergyman refusing a fee from a physician? If that person is to be found, I would not mind being the medical attendant of that pastor.

I would not pretend to say that ministers ask for gratuitous medical services, but they can hardly be blamed when we force such services upon them. Is it not time to have this element in discussion of the question of medical charity viewed in its proper light? Our profession should respect Christianity and all those who help to preach the Gospel, but can they not do so in a way common to all ordinary folks? It is not my desire to make any invidious comparison between the medical and clerical professions; but can we not ask if the latter are, after all, so badly off?

A young minister, as soon as he takes a charge, which is generally immediately after he graduates, has a stated salary to live upon, a house is furnished for him, and he has abundance of kind friends. How is it with the young doctor? Well, we all

know. Every young practitioner who starts to make a living by his practice, can endorse the sentiment of one of your correspondents, who says that he used to envy the cartman who was his next-door neighbor.

I am not disposed to be unjust to a very important class of professional gentlemen who do a great deal of good to the world; still, at the same time, there is another class, to which I belong, who can do almost as much good as they, and in their interest I have thought fit to speak. You can use my name, if desirable.

Yours, etc.,

———, M.D.

———, N. Y.

PRESCRIPTIONS FOR THE POOR.

To the Editor of The Medical Record.

Sir:—The charges made by druggists to the poor for their prescriptions are not what they should be, nor what they can be if the right principle is adhered to. The assertions in the last number of the Record are true to the letter. Why could not some plan be devised to show fair play to a patient of moderate means, and a physician who has moderate expectations of his fees. I am in the habit of advising such of my patients to go to particular drug-shops, and it is understood that when I write the letter P in the corner of the paper, that the proprietor shall consider the condition of the patient, and charge a very moderate price. Even then they make a large profit, and are satisfied.

Some physicians have said that their determination is to have the patient pay well for medicine at least, if not for advice. The druggists never object to this, but unless the doctor has an interest in the store he only does himself an injury to benefit the greed of another. I know this principle to be carried out at one of our college clinics. There was an arrangement, implied at least, that the store in the neighborhood of the college should have all the prescriptions, and the freest latitude was taken by the clinical assistants to write prescriptions, and the most exorbitant charges were made for them. This, in my opinion, was victimizing the poor under the cloak of charity.

Now, we know with few exceptions medicines used in prescriptions are not dear, and if any one does not believe this, let him try to find the medicines himself for his patients. I can perhaps speak from experience on this point, when I say that the earlier years of my practice were spent in the country. I had a fair business, that is to say, a large number of patients, supplied the medicines, and yet my drug-bill at no time amounted to a hundred dollars a year. This was not near what it cost me for the wear and tear of my driving establishment. If one would strike an average for each patient he would find that, extra of the price of a visit, there would only be a few cents. Under these circumstances, if we want to do an act of real charity, would it not be as well to give the medicines ourselves as to trust to the cupidity of many of our druggists?

Truly yours,

A. F. D.

Philadelphia, *October* 27, 1873.

A NEW TREATMENT FOR TAPE-WORM.

To the Editor of The Medical Record.

Sir:—I desire to report the following case, involving, I believe, a new treatment for tape-worm.

In March last, J. M—— applied to me to rid him of a tape worm. He had been under treatment previously, had taken Kousso, Malefern, and Pumpkin-seed, without cure. I gave him large doses of turpentine, with no effect save to excite some inflammation of the stomach. In August the man applied to me again, not so much to be rid of the worm, as for relief from the gastric troubles excited by the animal. After these had passed off, I gave with the usual precautions a half-ounce of fluid extract of Malefern, but still without the hope for effect.

The idea then struck me, if small quantities of "carbolic acid" are so pernicious to leeches, is it not probable that the drug might be used against a tape-worm. Accordingly, having purged the patient, I administered six grains of "carbolic acid" in a half-pint of water, four times a day. After two days of this treatment, as only a few joints of the worm had been voided, I changed the vehicle from a liquid to a pill form. Powdered extract of liquorice was used, and each five-grain pill contained two grains of "carbolic acid;" of these the man took one every hour, and a purge of rhubarb and jalap every morning. He soon began to pass large fragments of the worm, and on the third day the head and about four feet of the body of a tænia solium. He had taken thirty-five pills without inconvenience of any kind. He got well quickly, has remained well since, and I am satisfied is cured. I have since thought that the pills would have been improved by a delicate coating of paraffine; the object being, of course, to cause the pill to pass through the stomach unchanged into the intestine, carrying with it the "carbolic acid" in direct contact with the worm.

J. H. Bill, *Surgeon U. S. Army.*

Davids's Island, New York,
October 15*th*, 1873.

THE PRACTICE AT ST. LUKE'S HOSPITAL, NEW YORK.

To the Editor of The Medical Record.

Sir:—In your publication of June 16th appeared a report of "Practice and Peculiarities of Treatment at St. Luke's Hospital," in which there were some inaccuracies, which you will perhaps permit me to correct here, as I was Resident Physician of St. Luke's at the time, though not at all responsible for the article.

I will take them seriatim. In acute rheumatism, the mode of administration of iodide of potassium and sulphate of quinine, was combining them at the time of administration, and not giving them at intervals, as stated.

In order to do this, a solution was made of ten grains to the drachm of water, of either salt, and a fluid drachm of the first and a fluid drachm and a half of the second were added to a third of a tumbler of water. This was given every four hours, and continued without producing cinchonism, for a week in some more obstinate cases. Usually forty-eight or seventy-two hours ended the malady.

The remedies spoken of as efficacious in night-sweats were used with varying results. In most cases a change from one to another accomplished an abatement for a few nights, and it followed whether the change was in one direction or another.

Ergot acted well, perhaps longer than acid, oxide of zinc, hyoscianus or any of the other various remedies.

Sponging the body at evening was grateful to the patient, and a good prophylactic.

In "reduction of high temperature," ice-water was

repeatedly used and with most gratifying results, whether employed in acute rheumatism, typhoid fever, or other cases. Life was unquestionably saved by its use in a number of cases when the temperature had reached 106° or 107°, and the patients were comatose.

In one instance, ice was applied to affected joints, in acute articular rheumatism, with recovery in thirty-six hours as a result.

In sub-acute pleurisy the treatment was not at all as uniform as stated, and it was claimed (but not conceded) by each advocate that his treatment was the successful one, whether diuretics and blisters, tonics and no blisters, or paracentesis thoracis was practised. One point was established, that in a case with large effusion which did not subside spontaneously, or during the course of other treatment, if a portion of the fluid were removed by trocar or aspirator, the absorption of the remainder was facilitated, and in but one case did death follow tapping, and here the pleural sac was filled for several weeks while other remedies were employed, and when at last resorted to, the patient was quite exhausted, and only a small amount was taken away.

The statement that in "Bright's disease the general principles embrace the administration of tonics and diuretics," is only true of chronic cases.

The treatment of acute nephritis was most gratifying where milk-diet was adhered to, and no medicine used. The custom was to give the patient whatever amount of milk he or she would take at meals, with cracker or oatmeal or other light matter. At the intervals they drank a cup of milk once in two hours, if they wished it. An increased amount of urine of lower specific gravity and subsidence of the œdema followed, with such promptness as to surprise the practitioner new to the use of it.

Among the cases were the following:

Rose McA——, aged 25, was admitted May 10th, having all physical signs accompanying albuminuria. Examination of her urine confirmed diagnosis made from physical signs and history, urine containing casts and albumen in large amount.

She was put at once upon exclusive milk-diet, without medicine, except an occasional laxative, and in three weeks the œdema had disappeared and casts were no longer found in her urine, but a trace of albumen and some granular matter remained. On the seventh of June she was discharged at her own request, having lost all traces of the malady except emaciation and weakness. She was then on improved diet and tonics, but milk was still an important part of her nutriment.

Frank J——, aged 38, was admitted on 16th Oct., 1872, having a history of treatment by a homœopath for "bilious intermittent" during the preceding two months.

His œdema, cachexia, and symptoms generally pointed to renal affection, and examinations of his urine corroborated the opinion; albumen, blood, and granular casts being found. The quantity of urine passed in twenty-four hours was not below the normal amount. He at first was put upon "Bethesda water," with which we were experimenting, and improvement resulted from its use for about a month, and at the end of that time milk-diet was added.

On the twentieth of December, examination for the first time showed a normal condition both under microscope and in quantity—and patient was soon after discharged. He had returned from time to time with specimens of his urine, and examinations have continued to show satisfactory evidence of recovery.

Paul G. A——, aged 57, was admitted Aug. 24, having been under treatment with tr. mur. ferri and inf. digitalis for six weeks at another hospital.

His urine contained 80 per cent. albumen, with granular and hyaline casts. His treatment with iron and digitalis was continued to Oct. 1st, when milk was substituted. He was at that time passing forty ounces of water in 24 hours.

On Oct. 5th, passed one hundred and twenty ounces, and continued to do well with the exception of an attack of rheumatism, during which treatment was changed.

Dec. 1st, water contained no casts, and albumen 30 per cent.

Feb. 9th, discharged at request; still farther improved, but feeble in strength.

GEO. D. BLEYTHING, M.D.

135 EAST SEVENTY-EIGHTH STREET.

October 11th, 1873.

HYGIENE OF TOWNS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—Large cities like New York, Philadelphia, Chicago, are amply provided with splendid sanitary organizations. They have Health Commissioners, Inspectors, Hospitals and money; epidemics are combatted, and even prevented, by every means that science can suggest.

Yet an immense majority of the people of the United States live outside these cities, and they are yearly exposed to epidemics without any efficient plan of protection such as sanitary science in this age ought to furnish.

How many lives might have been saved throughout the country last year, if towns possessed sanitary means for abating small-pox as well adapted to their needs as those of New York are adapted to the needs of that city!

It is to attempt to induce among country physicians some interest in the "hygiene of towns," which I hope may develop into a science in time, that I offer what I believe to be the best plan for checking small-pox in towns of less than 50,000 inhabitants.

After the Chicago fire, I had occasion to make a tour among the physicians of the North-west. Among other matters upon which I asked information was the present subject, and I became acquainted with the various plans adopted in fifty towns to check small-pox, which was then rife. The plan generally adopted was exceedingly inefficient: it consisted in the appointment of physicians to visit all the houses within a certain limit and to vaccinate the inmates. This plan may answer well in metropolitan cities where the people are used to obey ordinances, and where there is a responsible and well-paid force to execute it; yet it did not save Philadelphia in the winter of 1871–2, when in surrounding towns it was common to see upon places of business such placards as the following: "No Philadelphia goods sold here." But the great objection to it in smaller towns is, that many people regard it as an invasion of their premises and refuse to receive the vaccinator, while physicians become tired of their part in the proceedings, shirk the duty, and leave it to the people to get vaccinated or not as they please; then all intelligent people do get vaccinated, but the bottom stratum of society continue to nurse contagion and indifference.

In Chicago the thousands who presented themselves at the relief stations for bread after the fire were compelled to exhibit certificates, or to have their families

vaccinated on the spot by physicians appointed for the purpose, before they could receive aid. This system worked admirably, reaching the class who are always the carriers of contagion; I cite it to indicate this class.

There are many other plans of public vaccination which might be mentioned, but there is only one which, in my opinion, is deserving of consideration; is is sufficiently simple, and consists in appointing physicians to be at certain public places, hotels, or schoolhouses generally, at certain stated hours, during two or three days, to vaccinate free all who may present themselves; this to be thoroughly advertised by posters.

The motives and impulse to which this plan appeals in the people are threefold, viz.: fear, cupidity, imitation; or, to paraphrase it: 1, the desire for safety on the part of families; 2, the universal appreciation for gratuitous services; 3, the enthusiasm of a general movement in which each one feels it a duty to influence the neighbors. To these may perhaps be added that innate sense of justice (to self) which makes a man reluctant to see his taxes publicly expended on vaccine and such things without participating in the benefit himself.

I am convinced that wherever this plan shall be adopted and properly carried out, it will be successful. A very good illustration of its working was seen in Phillipsburg, N. J., three years ago; it was tried when the trade of the town was seriously affected by a small-pox epidemic. After all the private vaccinations carried on during three months of the epidemic, and while it was still increasing in violence, five hundred children were presented at the stations appointed for public vaccination; this in a town whose population was only 7,000. The epidemic was checked instantly, and although it continued unabated in Easton (across the Delaware), where other plans were tried, Phillipsburg remained free from it for nearly two years, when the rapid growth of the town, filling it with strangers unvaccinated, caused the disease to appear again.

In the summer of '72 the epidemic of cerebro-spinal meningitis, which had found in Scranton so congenial a habitat, was followed by an epidemic of small-pox, which promised to do serious injury to the business interests of the city, and was of an unusually fatal type; slight in June, but spreading steadily until September in spite of the efforts of the sanitary police, who had been appointed to isolate the cases: 366 cases of small-pox had occurred in that time within the knowledge of the authorities, with 140 deaths; and doubtless a great many cases were concealed from them.

It now became evident that something must be quickly done to check the spread of the disease and save the business interests of the city; the press clamored for active measures. It was then that the plan detailed above was presented to the mayor and council, and a meeting of physicians called to discuss it; at that meeting many other plans were offered, but were all decided to be inferior to this. It was adopted by the council, and one thousand dollars were appropriated to carry it into effect and to pay the sanitary police. I hold it to be a principle that physicians should be paid for such services, and that their efficiency will be very apt to be in proportion to their pay.

Fifteen hundred children presented themselves for vaccination; this was in the latter part of September; the epidemic ceased immediately, the sanitary police were discharged within a week or two, and the city has remained free from small-pox as an epidemic to this day. I regret to say that in one ward of our city the public vaccination was not efficiently carried out, and that consequently sporadic cases continued to occur there.

In offering this experience to the profession, I would summarize its lessons as follows: 1st. The visiting plan may work well in metropolitan cities, but is too expensive, laborious, and unpopular elsewhere. 2d. A physician should be appointed by the city (or town) authorities for each contemplated vaccinating centre, and be paid to attend to it for two or three hours on one or two consecutive days, and on one day a week later to examine results. 3d. One physician should be designated to inspect the work at the vaccinating stations and to have procured a supply of bovine or other reliable virus, and be responsible for the proper performance of his duty. 4th. Extensive advertisement is necessary.

If these details are faithfully attended to, it will be found that the people will respond promptly, and that small-pox will disappear as surely as there is truth in Jenner's great discovery.

Yours, &c.,

J. E. O'BRIEN, M.D.,

Scranton, Pa.

CAUTERIZATION AND HYDROCHLORIC ACID AS PREVENTIVES OF RABIES.

A LETTER FROM

JOHN. J. CALDWELL, M.D.,

BALTIMORE, MD.

To the Editor of The Medical Record.

SIR:—Concerning the "New Treatment for the Prevention of Hydrophobia after Inoculation," so vividly reported by Paluel De Marmon, M.D., in your number of Sept. 15th, 1873, I beg leave to state, that in the fall of 1860 I was called to see the granddaughter of your estimable citizen, Jno. B. Dunham, Esq., the well-known inventor and manufacturer of the overstrung piano.

She was bitten by a mad dog whilst awaiting her cousin's return from the store and post-office at East Chester, near New York City. The dog had bitten several animals, and coming in contact with her pony, nipped it on the nose, causing the animal to stumble and throw her upon the ground, when she was bitten, the dog's teeth penetrating the pectoral muscles. She was also badly bruised.

I saw her in a few moments after the accident, and immediately cauterized and washed the wound with warm water, and finally applied strong hydrochloric acid to the parts. This, with careful hygiene, was all the treatment.

For aught I know to the contrary, the patient is still living,—at all events she was a few years since. All the bitten animals, including the pony, died of hydrophobia within thirty days.

My only object in mentioning this little incident is to show the prophylactic virtues of other agents in connection with cauterization. There are many persons in and about New York who will, no doubt, remember the above case.

Certainly, Dr. De Marmon deserves great credit for his promptitude and originality.

61 St. Paul Street.

New Instruments.

A NEW INSTRUMENT FOR THE INSUFFLATION OF POWDERS INTO THE LARYNX.

By GEORGE M. LEFFERTS, M.D.,

NEW YORK CITY.

In the treatment of laryngeal diseases by means of the insufflation of powders, the instrument most commonly employed is the ordinary tube of hard rubber or metal, tapering gradually to a pointed end and bent at an angle of about 120°. The powder is introduced through a small opening in its upper surface, closed by a slide, and is propelled through the tube into the larynx by means of a forcible expiration on the part of the operator; connection between his mouth and the instrument in hand being maintained by means of a small flexible rubber tube attached to the extremity of the instrument. The objection to this method is twofold: patients, especially those in private practice, will object to it as inelegant and disagreeable; the propelling force being the breath of the operator, it passes into the throat of the patient, and even if entirely unobjectionable, creates in many cases on his part a sensation of disgust, and even in delicate persons a feeling of nausea difficult to overcome. The surgeon himself, when using the above instrument, is not entirely free from the danger of disagreeable effects. Patients with throats extensively ulcerated by syphilitic or carcinomatous disease, and with the fetid breath which accompanies them, are extremely liable, at the moment that a powder is blown into the larynx, to cough violently or to make a forced expiration, in which case, by no means an exceptional one, as all laryngoscopists to their cost know, the surgeon receives in his mouth more or less of the expired breath of the patient, together with the particles of the powder remaining in the tube.

On account of these objections to it, the above instrument is becoming less and less used by laryngoscopists.

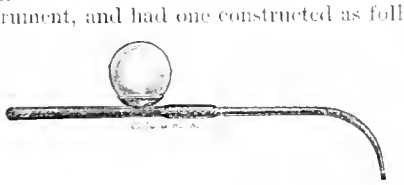
The various modifications which have from time to time been introduced to overcome the above objections are clumsy, and do not answer their purpose; for instance, attaching to the extremity of the india-rubber tube a balloon of rubber, which balloon being placed under the arm, between the knees, or beneath the foot of the operator, is compressed at the moment that the tube is introduced into the larynx. It has the objection of causing too much movement on the part of the operator at the moment of compressing the balloon, thereby disturbing the position of the tube in the larynx and the accurate application of the powder, and further, the air rushing back through the tube, after the balloon has been emptied to fill it, carries with it the powder remaining, so that after a few applications have been made to the throat the balloon becomes partly filled with an admixture of powders rendering it unfitted for further use.

The best substitute for the above tube has been the "Insufflator of Rauchfuss." This consists of a hard rubber tube larger than the preceding, but in other respects similar, terminating at its end in a rubber ball of about two inches in diameter instead of a flexible rubber tube and mouth-piece. The instrument being held between the index and middle fingers, the ball at the right moment is compressed by means of the thumb, and the powder thus expelled from the tube.

The instrument is therefore free from the objections urged against the preceding, but has one peculiar to itself: owing to the awkward position of the hand below the instrument, and steadying it by only three fingers, a careful and accurate introduction of it into the mouth and over the epiglottis is very difficult, and, in patients with irritable throats, next to impossible; and further, at the moment of compressing the ball with the thumb, an impulse forward is given to the instrument impossible to avoid, and which materially alters the position of the point in the larynx and throws the powder wide of its mark.

For a general application to the interior of the larynx, the instrument answers its purpose; but for a special and delicate operation, the placing of a minute quantity of a powder upon a small ulcer of the vocal cord, for instance, it is unsuited.

In order to obviate these defects, I have modified the instrument, and had one constructed as follows:



The hard rubber tube is 8½ inches in its horizontal and 2 inches in vertical length, and is made much lighter and of smaller calibre than that of Rauchfuss.

It is closed at one end, and from thence tapers gradually to its bevelled point. The curve forms the arc of a circle of about 3¾ inches in diameter, and the point indicates a line which makes a right angle with the direction of the shaft. On the upper side of the tube, 4½ inches from its closed end, is placed a rubber ball of 1½ inches diameter; it is set in a small cup-shaped projection from the tube, and communicates with its lumen by a free opening. The instrument, from its closed end up to the ball, is solid, and forms a firm and convenient handle. Immediately in front of the ball is an opening in the tube, closed at will by a slide through which powders are introduced.

The advantages claimed for this instrument are as follows:

1st. It obviates all the objections that can be urged against the first form of apparatus.

2d. It admits of skilful and accurate introduction, and remains steady in the hand during compression of the ball, thereby insuring an accurate application of the powder.

The tube is held by the hand in the position of a writing-pen, the index-finger resting lightly upon the rubber ball. In this position, undoubtedly the true one and safest for a laryngoscopic instrument, it is introduced into the mouth in the same manner and as gently as the laryngoscopic mirror. At the moment that the point of the instrument passes over the epiglottis the operator can allow his third and little fingers to rest upon the cheek of the patient, the instrument being fully steadied by the remaining three fingers which hold it. He thus obtains an additional point of support, and is enabled to carry the point of the instrument slowly and accurately down into the larynx and direct it to any desired point.

At the moment of compressing the ball by means of the index-finger which rests upon it, there is, and can be with care, no sudden movement; a moment's trial will convince that the downward pressure of the index-finger in this situation is much more steady and forcible than the same movement forwards on the part

of the thumb, as with the apparatus of Rauchfuss. The instrument is steadied by the placing of two fingers upon the cheek of the patient, if desired, and a counter support against the vertical pressure on the ball is also given by the hand below the tube, it resting in the hollow between the thumb and index-fingers, and being grasped by the middle finger and thumb after the manner of a pen. A further change may be made in the instrument by those who desire it, by bending the tube in its shaft, thus forming an angle with its concavity looking to the right, after the form of tube used by Prof. Schrotter, of Vienna, and by this means carrying the hand of the operator to the side of the mouth of the patient, out of his line of vision and from interference with the rays of reflected light from his forehead mirror; (when this change is made, the above instrument must be made longer in its hollow shaft).

The straight tube, however, in most hands answers the best purpose, is easier of introduction, and does not have the objections urged against the "double curve" by Prof. Störck of Vienna and others, that the double angle of the tube giving an increased leverage, the slightest movement in the hand of the operator makes a very marked difference in the position of the point of the tube in the larynx; and secondly, that the position of the hand, without having marked advantages, is awkward, and requires that the attention of the operator be divided between the position of his hand and the point of his instrument.

333 West 22d Street.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from October 19, 1873, to November 4, 1873

Knickerbocker, B., Assistant Surgeon.—Assigned to duty at Camp Harney, Oregon. S. O. 146, Department of the Columbia, October 17, 1873.

Girard, Assistant Surgeon.—Assigned to duty at Yorkville, S. C. S. O. 180, Department of the South, October 20, 1873.

Cleary, P. J. A., Assistant Surgeon.—Granted leave of absence for three months. S. O. 210, A. G. O., October 23, 1873.

Matthews, W., Assistant Surgeon.—To report in person at these Headquarters for assignment. S. O. 206, Department of the East, October 22, 1873.

Byrne, C. B., Assistant Surgeon.—Assigned to temporary duty at Willett's Point, N. Y. H. S. O. 210, A. G. O., October 23, 1873.

Medical Items and News.

The Hygiene of Public Schools.—In regard to the necessity for sanitary inspection of our public schools there seems to be no doubt except by members of the Board of Education. The *New York Evening Post*, in a recent article upon the subject, thus speaks of some of the uses of a medical superintendent:

"He is a check upon bad teachers and an aid to good teachers. He is the terror of architects who undertake to build new school buildings. He is a most valuable and necessary public officer, and it is not only disgraceful but dangerous that an attempt should be made in the city of New York to manage the public schools without his assistance."

We entirely agree with this opinion, and believe that the time is not far distant when the profession, as a body, will make its influence felt in this as it will in other matters pertaining to public health.

Sir Henry Holland, Bart., M.D., D.C.L., F.R.S.—The death of this distinguished man occurred in London. He belonged to the generation that was in its prime when Scott, Byron, and Wordsworth still flourished, and was the physician or friend, and in some instances both, of Campbell, Moore, Joanna Baillie, Rogers, Lord Gray, Lord Lansdowne, Lord Brougham, Earl Russell, Macaulay, Sydney Smith, Hallam, and others, whose names will go down to posterity.

Sir Henry was the eldest son of Peter Holland, Esq., and was born at Knutsford, Cheshire, England, October 27, 1788, and had just entered on his eighty-sixth year when he died. He was educated at the University of Edinburgh, where he graduated M.D. in 1811, and soon afterward he made a tour of Greece and the Ionian Islands, of which he published an account in 1815, under the title of *Travels in Albania and Thessaly*. On his return to England he established himself in London, and soon attained a prominent position in the medical profession. He was appointed Physician in Ordinary to the Princess of Wales, afterward Queen Caroline, in 1811, to Prince Albert in 1840, and to Queen Victoria in 1852. He was made a Baronet in 1853. He made eight or nine voyages to this country, the last in 1869.

Dr. Henry Stuart Hewit, N.Y.—At a meeting of the New York Academy of Medicine the following preamble and resolutions were passed:—

Whereas, This Academy has with profound regret learned of the sudden death of a distinguished member, Dr. Henry Stuart Hewit; therefore, be it

Resolved, That in his eminent abilities, high professional attainments, and earnest personal character we recognize the high-toned, conscientious physician whose devotion to the discharge of his duties endeared him to all who knew him, and earned for him the respect of the community in which he lived.

Resolved, That in him we lose a member who in many high and responsible positions deserved well of his country, having served on the medical staff of the United States Army in two great wars—the Mexican and the civil war, and having by sheer force of merit won, during the late conflict, the rank of Medical Inspector.

Resolved, That these resolutions be entered in full on the minutes, and that a duly authenticated copy of the same be transmitted to the family of deceased.

Respectfully submitted,

Richard J. O'Sullivan, M.D.
William H. Thomson, M.D.
John Burke, M.D.

The New York Academy of Medicine.—The Academy will celebrate its *twenty-sixth anniversary* at the *College of Physicians and Surgeons* (23d street) on *Thursday*, 20th inst., at 8 P.M. The oration will be delivered by Prof. J. C. Dalton, M.D. After the oration the Fellows will hold a "Social Gathering" at the *Ashland House* (Fourth avenue), where an entertainment will be provided. Tickets ($2.00 each) may be obtained from the Committee.

J. G. Adams,
Gouverneur M. Smith.
J. Lenox Banks.
Austin Flint, Jr.
T. M. Cheesman.

Medical Department of Life Insurance.

THE LAWS OF TRANSMISSION OF RESEMBLANCE FROM PARENTS TO THEIR CHILDREN.

By JOHN STOCKTON-HOUGH, M.D.,

OF PHILADELPHIA.

PART IV.

WHY MALES RESEMBLE THEIR MOTHERS AND FEMALES THEIR FATHERS.

The fact of males resembling their mothers and maternal grandfathers, and females their fathers and paternal grandmothers, was well known to most ancient philosophers and physicians, and many were the reasons given for this condition of resemblances, though none seem to have gone beyond atavism, until in the present day reversion has taken its place. All terms hitherto used as expressive of this condition are without meaning in regard to the proximate cause. The writer will give below what he considers to be the proximate cause, knowing of no other satisfactory explanation as having been given, and offering this as original.

Males are begotten from mature ovules (eggs), and females from immature ovules, hence the *ovule* from which a male is derived is (for a certain length of time, probably from three to seven days) *longer under the sole influence of the mother* than the ovule from which a female is derived, and as the period beginning with fecundation and ending with the extrusion of the ovum from the Graafian follicle is claimed by some as that in which resemblance and hereditary predisposition are impressed, we are led to believe that the sexual differentiation in the resemblance of sons and daughters to their parents is principally due to the difference in the time in which the ovule is under the sole influence of the mother, modified, perhaps, in some degree by the dynamic difference in the ability of the male element to fecundate a mature or an immature ovule, the latter being the more difficult. This, then, appears to be the cause of the law, subject, nevertheless, to differences in nutrition of the embryo, and variations in the condition of the mother during gestation.

CONCLUSIONS.

The author recapitulates the deductions and conclusions arrived at in this paper, at the risk of being tedious, for he believes that every person in writing a philosophical dissertation should state clearly in the beginning what he desires to prove, and finally, in as succinct a manner as possible, the conclusions arrived at. A neglect of this is as culpable as the lack of a complete index to a book. Authors do not deserve to be considered authority on the subject in which they have inflicted on the reader the necessity of perusing the entire text, and, moreover, merit the neglect which they so frequently get.

Recapitulation:—

1. In general, children of both sexes resemble their mother more than their father in physiognomy, habits,* constitution, and temperament.

2. Usually boys resemble their mother more than their father in physiognomy, habits, constitution, and temperament. In the same relationship girls resemble their father more than their mother.

3. As to whether there is any constant relationship between the physiognomical resemblance and a predisposition to the diseases of the person resembled, it is very difficult to decide from the data at hand, but it would appear from the few facts in which any observations were made in this direction, that there was a larger percentage of cases in which inherited diseases were exhibited where there was no resemblance than where there was such physiognomical similitude. In other words, children have resembled one parent in general physiognomy, while they have inherited the constitutional peculiarities and diseases of the other, more frequently than where they have derived both those conditions from (one) the same parent.

This view of the matter is supported by the following cases already recited in this article:—

Mr. Sedgwick's case of ichthyosis, where a girl inherited "the disease from her mother," while "she inherited the features of her father."

Dr. Moreau asserts that personal resemblances and cerebral disorder may be transmitted by either parent, but never by the same.

Dr. James Webster assures us that insanity is more frequently transmitted by mothers to their female offspring than to their male children. And Dr. Theophilus Thompson has shown the same fact to be true of the transmission of pulmonary consumption.

The facts are far too few to warrant us in defining this as a law, yet I know of no facts or theories to the contrary. I am under the impression, however, that physicians have usually regarded a physiognomical resemblance as evidence of greater liability to the hereditary disease of the person resembled, yet it is quite possible I may be mistaken in this view of the matter.*

In general, then, hereditary and acquired diseases and defects are more likely to be transmitted to offspring of the sex in which they originated, and thereafter to be subject to the principle of sexual limitation, either directly from parent to child, or by interrupted or atavic descent, from grandparent to grandchild.

Though sons are usually best able to follow the avocation of their fathers, it is undoubtedly true that men inherit the genius, talent, and intellectual excellence and morality of their mother or their mother's father, while daughters inherit the same qualities from their father or paternal grandmother.

4. *Females more frequently transmit* hereditary diseases and defects than males, though they *less frequently exhibit* them. Males less frequently transmit, and more frequently exhibit, inherited diseases and defects.

I have already, in my last paper,† called attention to, and offered an explanation of, the phenomena stated in the last conclusion (4), and may repeat it here:—

The ovule (egg) from which a male is derived being

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* Dr. W. B. Carpenter, the distinguished physiologist, has recently written an able article "On the Hereditary Transmission of Acquired Physical Habits," in The Contemporary Review, April and May, 1875.

* Since the above has been in print, I have happened upon the following, which seems to confirm this opinion.

"When only one of the parents is the victim of constitutional disease, the tendency to similar constitutional diseases is most obviously expressed in those children who most resemble that parent in physical conformation and appearance, and it has been observed that, when both parents suffer, the tendency will sometimes be expressed more often in the daughters of the family than in the sons, or more often in the sons than in the daughters."(1) Prof. Gross appears to have given out much the same opinion, in his far-famed work on surgery.(2)

(1) *J. Adams Allen*, M.D., LL.D., Medical Examinations for Life Insurance, Chicago, 1867, p. 46.

(2) Samuel D. Gross, M.D., LL.D., D.C.L. Oxon., A System of Surgery, &c., &c., 2 vols. 8vo, Philadelphia: H. C. Lea, 1859—1872.

† "On the Relative Viability of the Sexes," &c, N.Y. MED. RECORD, June 16, and July 16, 1875, pp. 297–302, 553–4–5.

for a longer time under the sole influence of the mother (before fecundation, and longer in utero-gestation) than the egg from which a female is derived, acquires more of her physical constitution and peculiarities, resembles her more, or inherits more of her physical defects and tendencies, and this ovule is fecundated by a weaker element on the father's part than his female offspring; while the ovule (egg) from which a female is derived is a shorter time under the sole influence of the mother, being impregnated earlier in its course of development (being less mature), and besides this it requires the highest power of the male element to communicate the impregnating influence to it.* Hence we have less hereditary disease *exhibited* in the female, yet she may *transmit* with greater frequency and facility than the male, though it may not have developed in her.

The reason that females do not exhibit hereditary disease as frequently as males, is because of a *higher degree of vitality* in them, which gives them greater power to restrain the appearance of the predisposition, and an *inferior degree of developmental evolution*, retaining in their constitution as germs, what in men become fully developed diseases and defects.

2063 Walnut Street, Philadelphia, July, 1873.

BRIEF REMARKS UPON MEDICAL EXAMINATION FOR LIFE ASSURANCE.†

BY H. S. PURDON, M.D., L.R.C.P.,

PHYSICIAN AND LECTURER ON CLINICAL MEDICINE, BELFAST GENERAL HOSPITAL; PHYSICIAN TO THE HOSPITAL FOR DISEASES OF THE SKIN; LATELY EDITOR OF "THE JOURNAL OF CUTANEOUS MEDICINE."

GENTLEMEN,—In place of the usual clinical lecture this morning, I shall ask your attention to the subject of the medical examination of lives for insurance, which, I need scarcely say, may at some future day be part of your duty. I have gathered my information from every available source, and claim nothing on the score of originality, merely adding thereto such observations of my own as I have put together while for some years acting as Medical Referee to three large insurance offices in this town. Allow me, however, in the first place, to prefatce the following remarks by an extract from Dr. Sutton's introductory lecture at the London Hospital. He says:—"The student of medicine in learning physiology begins with the tissues of the body, but he may also study man in his individual condition by examining his ideas, sensations, movements, and secretions, his organization in action, endeavoring to find out how the vital dynamics of man's system result from elaborate arrangement of tissues and organs." All parts of the body, Dr. Sutton proceeds to say, work independently, but all uniformly and co-relatively. Every viscus and every tissue has its own specific action, each cell its own life, and the sum of these makes up the life of man. Most individuals have certain peculiarities, mentally as well as physically. The shape, features, even the very walk of a child may, and often does, resemble either parent. If this be so as regards outward appearances, we may well reason by analogy that the internal and minute structures of the body are similar. Inherited structures and external conditions are the two factors concerned in the growth and development of every living thing. According to Dr. Brinton, "the tendency to phthisis in offspring is more likely to be transmitted by the mother than by the father thus diseased. But any preponderance is often outweighed by a strong predominant likeness of the offspring to either of these parents. Such an external likeness may well be supposed to be associated with an equal similarity of constitution."

Dr. George Combe, in his "Constitution of Man," remarks that peculiarities, not of body merely, but also of the mind, are for the most part observed to be congenital, and not unfrequently hereditary. Parents often revive in their offsprings, who resemble them not only in countenance and form of body, but in dispositions of mind, in virtues and vices. The imperious Claudian family flourished in Rome, courageous, ferocious, and proud. It produced the pitiless tyrant Tiberius, and at length, in the monstrous Caligula, Claudius Agrippina, and finally Nero, became extinct.

Dr. Carroll, in the New York *Medical Gazette*, November 19th, 1870, states that "diseases themselves are, with the exception of syphilis, seldom, if ever, directly inherited, but a tendency to them is; and whether this tendency is to remain latent during a long lifetime, or to be early developed into fatal action, will depend, to a great extent, upon external circumstances. A person, he says, with a constitutional liability to one form of disease may be capable of resisting influences directed against his stronger organs, as, for instance, the tendency to hepatic derangement will be aggravated by residence in a dry, warm climate, and held in abeyance by a cool moist one, while the scrofulous diathesis may remain dormant in the former condition, but soon succumbs to a bleak, damp atmosphere. The chances in the potential consumptive will be widely different if he lead a sedentary life in a crowded city, or an active one in the pure air of the country. Predisposition to heart disease may be called into activity by business anxiety, or emotional excitement of various kinds, which, under more favorable circumstances, would never have been suspected to exist." Of two flour millers, or bakers, applying to be insured, he whose family history shows a phthisical taint will be the worse risk, the condition of these two occupations being favorable to the development of the disease. The diet and mode of life beneficial to an anæmic or consumptive patient would be injurious to another liable to gout or fatty degeneration. This is to be taken into account in reports on such cases furnished to an insurance office. We must also notice short-lived robustness and comparatively frail longevity. We may find a man in a present condition of perfect vigor, whose family history and personal circumstances may render it doubtful if he will reach old age; or *per contra*, one whose appearance is far less promising may really inherit a type of much greater longevity, irrespective of any tendencies to particular disease in either instance.

It has been observed that men with slender bones, long, flat chests, irritable, feeble hearts, bad digestion, ill-developed muscular systems, whose brain and nerve actions are incapable of prolonged activity, are very liable to die of consumption. They have nervous temperaments, and are liable to disease of mucous tissues.

* This theory of a differential dynamic power of the male reproductive element was first maintained by the writer in "An Inaugural Dissertation, (presented to the Trustees and Faculty of the University of Pennsylvania, March 13, 1868, for the degree of Doctor of Medicine), entitled: Prepotency, Sexual Elective Affinity, Non-congeniality, or the dynamic differentiation of the Elements of Reproduction in the Human Species; the Cause of Relative Sterility. By John Stockton Hough, A.M., M. Chem., of New Jersey."

This theory is further substantiated in the author's paper on "The Effect of the Nationality of Parents on Fecundity and the Proportion of Sexes in Births;" also in his article on "Statistics relating to Births, Marriages, and Deaths, occurring in Philadelphia for the eleven years ending 1871." Penn. Monthly, Philadelphia, September, 1873, pp. 590 to 621.

† Published recently in Belfast, in pamphlet form.—EDITOR.

We therefore observe that with a peculiar build of body there is a particular standard of health and a liability to particular pathological changes. The conformation of body is dependent partly on inheritance, and is largely affected by external conditions. We know that plants or beings developed quickly are apt to die rapidly. Durability and slow growth go together. Vast numbers of children in large towns, the offspring of degenerate parents, shoot up quickly, like ill weeds, to end shortly their delicate and sickly lives. The phenomena of health and disease are the certain results of antecedent conditions.

The intermarriage of blood relations is not judicious. For these close unions have a tendency to intensify in offsprings not only any good quality in the parents, but also the bad—such, for instance, as the hereditary diseases, insanity, phthisis, gout, scrofula, etc.

Dr. Lambert, of New York, believes that in the diagnosis and prognosis of disease, the inherited or internal and absolute condition of the patient are of great consequence, and should be specially noted, so that complete reliance need not be placed upon the uncertain or incomplete statements of the applicant. Mature man, in all his sensations, emotions, intellections, and volitions, so far as they are physical phenomena, is the co-ordinated resultant of all his organs, and of constantly varying external conditions. Amongst the most important antecedent to consider, in valuing an individual life, is the longevity of ancestors. Inherited disease usually appears at about the same age in the inheritor as it did in the person from whom it was inherited. For example, phthisis. In some cases, however, it occurs earlier in the descendants than in the ancestors; but the general rule is that inherited fatal diseases have their issue at about the same age in a subject as that at which a near ancestor died.

The *special* tendency exhibited by some diseases to appear in the offspring of those affected with them may, and frequently does, remain latent for years, or even for the life of the individual. The next generation, however, sometimes suffers from the same class of complaints; consequently, the medical referee must not only look to the parents of the applicant, but to his grandparents, and, indeed, whole family.

The classification of lives adopted by different insurance companies in these countries is much the same for all. The following may be considered an example. It is that adopted by the English and Scottish Law Life Assurance Association:—

CLASSIFICATION OF LIVES.

Class I. Superior lives: having the prospect of more than average duration.

Class II. Average lives: involving no peculiar hazard, or presenting only unfavorable features of so slight a nature as to form no objection to assurance at the ordinary rate of premium.

Class III. Inferior lives: involving increased risk on account either of family history or personal condition, and therefore requiring an equivalent addition to the ordinary rate of premium.

The information to be acquired by the medical examiner may be classed under three heads:—

1st. Present state of health of applicant.

2d. His past history.

3d. The peculiarities of the family.

A minute and searching examination will enable us to answer the first question; but before entering into details regarding the second it would be well to offer a few remarks upon family peculiarities and diseases.

Dr. Steedman, of St. Louis, says:—"Consumption stands at the head of the list of inherited diseases, but it can be acquired independent of any hereditary taint." Niemeyer held the doctrine that phthisis is a frequent result of chronic inflammation, especially of pneumonia, and that a copious spitting of blood in persons predisposed to phthisis frequently does good by relieving congestion. Dr. Steedman holds that when a parent has died of acquired phthisis, free from hereditary taint, those children born before the development of the disease should be considered as comparatively exempt. "Few applicants," he says, "ever admit that a parent or other near relative has ever died of phthisis. It is frequently explained away by some special cause, as exposure to cold, or childbirth. The last excuse is especially calculated to deceive. It should be remembered by the medical examiner that phthisis often stands in abeyance during pregnancy, and as soon as delivery occurs runs a very rapid course." Phthisis occasions in Great Britain about one death in seven, or 15 per cent. of the whole mortality.

When one parent has died of phthisis the applicant should be rejected, unless it was a case of acquired phthisis dating years after his birth, and that the applicant has had very good health, and passed the age of forty-five years. When neither parents have died of phthisis, but two or more brothers or sisters have, he should be rejected, as this indicates a feeble organization or positive inherited liability to phthisis. If the applicant is amongst the last of a large family, the majority of which have died young, he should be rejected, because the evidence is sufficient to show that he or she belongs to a feeble stock. The few years following on puberty Dr. Brinton considers the most liable to phthisis, especially in unmarried females.

Hæmoptysis is a serious item in the calculation, as most of those who have suffered therefrom die of consumption. Niemeyer believes that hæmoptysis may occur, however, without any dependence on tubercle, but it may become a cause of tubercle by the effused blood undergoing caseous degeneration and exciting pneumonic processes. Skoda, of Vienna, holds that blood effused in the air-passages can never do so. Blood, he maintains, is a harmless, bland, unirritating fluid, and is easily absorbed, especially the fluid parts, merely pigment being left. Every person who has had hæmoptysis, unless dating many years back, should be rejected. Spitting of blood by applicants is often said to come from the throat, or to be due to sudden exertion. Dr. Mason remarks, in the Dublin *Medical Journal*:—

"The fact that hæmoptysis is not constantly prior or subsequent to any organic disease of the thoracic viscera has been frequently substantiated. Many people during puberty having suffered from repeated attacks of hæmorrhage from the respiratory organs, still arrive safely at the goal of ripe old age, leaving at their death no appreciable pathological signs of their ever having suffered from it. Though such is sometimes the case, we should still regard every case of hæmoptysis coming under our notice with suspicion, and endeavor to arrive at a knowledge of its direct cause. The more obscure this is, the less we should relax in our attempts to discover its origin. Hæmoptysis through mere ensanguinification, except, of course, such a hemorrhage as would result from a wound or the bursting of an aneurismal sac, is seldom directly dangerous to life. Though it may occur, as above stated, in persons whose lungs during life afforded no physical signs indicative of its origin, or after death exhibited no traces of its ever having taken place, and

though, as several well-authenticated cases prove, it may but supplementalize suppressed menstrual or hemorrhoidal discharges, still it must never be looked upon with unconcern. Hemorrhage from, if we may use the term, healthy lungs, even though it may sometimes relieve nature of a surplus of blood, must, however, have a deleterious effect on the system. In large quantities and frequent recurrence, it tends to produce anæmia, one of the most favorable fields for the development of disease of the chest."

Insanity belongs to the class of hereditary diseases. Where more than one case has occurred in the generation of the applicant he should be rejected, more especially if he either exhibits any marked eccentricity of mental or nervous organization. Insanity usually does not shorten life, but such people are liable to commit suicide.

Cancer and gout belong also to the class of hereditary diseases, but are not so important as those already mentioned. The latter, however, may lead to disease of the kidneys, as described by Dr. Todd.

Hereditary intemperance occurs next to phthisis in importance. No applicant who is intemperate in the use of alcoholic liquors should be accepted. But the great difficulty is to determine who is intemperate. Few men will admit that they are so. If the applicant is an acquaintance, you should make your conclusion from personal knowledge; if a stranger, judge of his habits from general data. Little reliance can be placed on answers to direct questions. Dr. Steedman asserts that habitual intemperance is usually productive of fluid stools in the morning. This fact should be remembered, and your questions applied in that direction. Dr. Brinton thus describes the habitual tippler: —He has a "fiery, unctuous skin, with its secretions reeking with volatile fatty acids; red, ferrety eyes, with tipsy glare rather than gleam; furred tongue, fetid breath, and trembling limbs. These are the chief characteristics of drunkards."

With one class of men alcohol acts only as a stimulus to the nervous system, giving, however, no real power, but finally producing exhaustion. Others are really improved by its moderate use. Digestion is thereby promoted, and the body gains in strength. In this class the habit, if kept in moderation, does not shorten life; but the habit is apt to grow, and will, if persisted in, finally destroy the health. Tavern-keepers have been noted as special instances. The incentive and temptations to intemperance are so great, that few resist it successfully. Every saloon-keeper runs this peril, and the younger the man the more dangerous the risk will be. The reformed drunkard is not a good life for insurance. His constitution is usually destroyed, and he is liable to return to his old habits on the occasion of temptation.

The excessive use of tobacco, it has been remarked, often causes palpitation of the heart, irregularity of pulse, dyspepsia, with obstinate constipation, debility, and nervousness. Any applicant presenting one or more of these symptoms should be rejected, whether due to tobacco or not, since they are certainly aggravated by its use.

The occupation of the person to be examined must also be taken into account, some employments tending towards disease and others unhealthy.

The arm should be examined for the scar left by vaccination. Mr. Marson has shown that the mortality from small-pox after vaccination varies with the number of marks. His observations are based on 15,000 cases. He found in every 100 cases of small-pox, after vaccination, having

1 mark,	8	died	(7.73)
2 "	5	"	(4.7)
3 "	2	"	(1.95)

and in every 200, with 4 or more marks, only one died. Each scar should be distinctly covered all over with little pits like the end of a thimble, and accompanied by loss of substance. Some people are said to have died of old age, when from subsequent investigation it may appear that cerebral hemorrhage, paralysis, or idiopathic gangrene carried them off. The disease occurring in elderly people, called by Dr. Hammond "multiple cerebral sclerosis," is insidious in its approach. It is recognized by tremor, beginning at first in a group of muscles and gradually extending; derangement of sensibility; sometimes hyperæsthesia, pain in the head, characterized by sharp paroxysms and clonic spasm of rectus muscles of eyeball.

Many cutaneous diseases cause little constitutional disturbances, and as long as an individual remains unaffected with any acute inflammatory affection, the existence of an ordinary skin disease will not in any respect diminish the average chance of longevity. Furunculi, or marks of tearing and scratching on the skin due to pruritus, should make us test the urine for sugar, as these complaints are common in diabetes. Indeed in all cases the specific gravity of the urine ought to be taken, and the urine tested, at least, for albumen. In one form of kidney disease,—viz., waxy degeneration,—the patient has a sallow complexion, occasional diarrhœa, and little or no albumen in urine. The use of the microscope is necessary if any suspicion exists. Retinitis is often due to Bright's disease.

In the history of past ailments presented by the applicant the mention of having had an attack of acute rheumatism should make us give particular attention to the heart, which is so liable to suffer in that disease.

Chronic pleurisy manifests itself in two conditions, *with* or *without* retraction of the side. A good many people who offer for insurance have suffered from an attack of pleurisy at some period of their life. After an attack the chest walls may be simply restored to their natural position, or they may sink inwards. These cases require very careful consideration on the part of the medical referee. If taken at all, an additional number of years, equivalent to the increased risk, should be added to life of applicant. Pneumonia, even when ending in recovery, generally leaves some impairment behind in the lung engaged. There are maladies, as has been noted, which are suspicious features in a person's life, from the liability they have to return, as gout, asthma, dropsy, dysentery, gastric ulcer, etc. Asthma is unfavorable, as it may leave its mark in shape of emphysema, finally leading to dilatation of right side of heart. An excessive deposit of fat, polysarchia, or corpulence, is very unfavorable. Moreover, persons thus affected are bad subjects for an acute illness, and liable to Bright's disease, from absorption of fat that surrounds the kidneys. Idiopathic erysipelas is another disease liable to return. Brinton describes a peculiar color of cheeks observed in some middle-aged people, due to little streaks of distended blood-vessels, giving a mottled appearance, and which is often connected with renal disease. Dyspepsia is a symptom of either functional or organic disease of stomach. Its cause requires to be carefully investigated, as Drs. Dobell and Hutchinson have described a form of dyspepsia characterized by dislike for fatty food that is the forerunner of phthisis.

Deformities of the chest. The "pigeon-shaped" chest is not so unfavorable. Rickets in children often

leads to deformity of the pelvis, hence child-bearing is more dangerous in females who have been so attacked.

Hernia is important, as it is apt to become strangulated. A rupture is more dangerous in females than in the opposite sex. Brinton believes that if a good-fitting truss has been constantly worn, the case is not so unfavorable. Amputation of a limb for disease is said to confer increased risk of visceral disease. Here the previous malady should enter into consideration of risk of insurance on life. Amputation for injury or accident is generally followed by a plethoric state, and a tendency to corpulency.

The presence of ulcers, if of long standing or extensive, imply a drain on the constitution, which, as "age advances and nutrition declines, may prove fatal;" hence these cases ought to be declined. Moreover, according to Dr. Fisher, the long continuance of an ulcer is apt to cause Bright's disease of the kidneys.

The force and frequency of the pulse is useful in detecting cardiac disease. Excitement, as in being examined, may quicken it for a time. An abnormal slowness of the pulse points towards cerebral disease.

The condition of the uterine functions must be carefully inquired into.

Residence in certain localities is injurious to health. In some places such diseases as ague, yellow fever, dysentery, liver disease, etc., are endemic; hence, if the applicant intends to proceed to these places, an increased risk is incurred.

The vital capacity of the lungs is a subject of vast importance, as with the spirometer we can often detect the very earliest stage of phthisis, even before physical signs exist, the vital capacity being reduced in first stage of consumption. The following table, after Dr. Davis, exhibits this more clearly:—

Height.	Cubic Inches.
5ft. 0 in. to 5ft. 1 in.	176
5 " 1 " to 5 " 2	177
5 " 2 " to 5 " 3	189
5 " 3 " to 5 " 4	193
5 " 4 " to 5 " 5	201
5 " 5 " to 5 " 6	214
5 " 6 " to 5 " 7	227
5 " 7 " to 5 " 8	228
5 " 8 " to 5 " 9	237
5 " 9 " to 5 " 10	246
5 "10 " to 5 "11	247
5 "11 " to 6 " 0	257

The relation between the weight of the body, the height, and circumference of the chest at nipples is important. The following is Dr. Steedman's table:—

RELATIVE PROPORTION OF THE HEIGHT AND WEIGHT OF THE HUMAN FRAME.

Height.	Weight.	Med. Chest.
4ft. 10 in	105 lbs.	32.56 in.
4 " 11 "	110 "	33.06 "
5 " 0 "	115 "	33.56 "
5 " 1 "	120 "	34.06 "
5 " 2 "	125 "	35.13 "
5 " 3 "	130 "	35.70 "
5 " 4 "	135 "	36.26 "
5 " 5 "	140 "	36.83 "
5 " 6 "	143 "	37.50 "
5 " 7 "	145 "	38.16 "
5 " 8 "	148 "	38.53 "
5 " 9 "	155 "	39.10 "
5 " 10 "	160 "	39.66 "
5 " 11 "	165 "	40.23 "
6 " 0 "	170 "	40.80 "
6 ft. 1 in	175 lbs.	41.30 in.
6 " 2 "	180 "	41.80 "
6 " 3 "	185 "	42.30 "
6 " 4 "	190 "	42.80 "

Example.—A man 6 feet in height should weigh 170 lbs. One-fifth of 170 = 34, which subtracted from 170, leaves 136; hence he would be accepted at the latter figure, all else being favorable.

Of course every one is not expected to weigh and measure exactly these average numbers; but, as a rule, 20 per cent., or one-fifth, is the maximum variation compatible with health.

ABUSE OF POSITION.

BY A MEDICAL DIRECTOR.

Outside of the larger cities the educated physician holds a very influential position among the people to whose physical wants he ministers. His opinion is often asked on matters which are by no means professional in their nature, and it nearly always carries with it great weight. Every individual, for instance, who has himself been relieved of suffering by the doctor's skilful treatment, or has had the satisfaction of seeing his wife or child apparently rescued by the doctor's efforts from the jaws of death, will be very likely afterwards to place the utmost faith in the physician's advice, upon no matter what subject it may be given. A word or a smile from him will often be sufficient to completely undo the hard-earned results obtained by the life insurance agent. Let us be more explicit. The agent, by dint of persistent and oft-repeated efforts, has succeeded, we will suppose, in inducing a young merchant's clerk to take out a policy of $5,000 upon his life for the benefit of his wife. The application is filled out and the young man is brought before the examining physician. In the course of the examination the applicant very naturally asks the doctor if he does not think it a good thing for a young man in circumstances like his to insure his life for a moderate amount. "Well, I don't know," says the doctor; "there is a good deal of humbug about this business of life insurance, and I for one would prefer to put my surplus into the savings bank."

The applicant is a very gamey fish and has to be managed carefully, or he will be lost to the agent. Even after he has been hooked there is no certainty that he will be landed safely in the company's hands, premium and all.

In the case under supposition the applicant places greater confidence in the doctor's few words of advice than in the elaborate and persistent arguments of the agent, and as a result refuses to take the policy when offered to him by the latter.

Under the old régime of appointing medical examiners, complaints of this kind were almost never heard, for the agent would always take the precaution to ascertain whether the examiner were friendly or not to life insurance as an institution, and avoid those who were not. According to the régime at present prevailing among the more careful companies, medical examiners are appointed simply on the ground of professional fitness and moral standing, and no precautions are taken to ascertain whether or not they are friendly to the business of life insurance. In every instance, however, they sign a formal document, accepting the position of examiner to the company which solicits their services. Under these circumstances it seems to us that the physician's duty is very

clear. The company does not ask him to play the part of an agent and sing its praises, but simply to perform faithfully his professional duty of excluding unsound or unworthy risks from the privileges of insurance. It is self-evident, however, that if he consents to receive a fee from the company, he is in honor bound not to injure its interests by word or action. Of course, if the company is in a bad financial condition, and he believes such to be the fact, he should refuse to serve as its examiner, for the very reason that he cannot conscientiously speak well of its soundness. But if he is simply opposed to the institution of life insurance, though believing that this particular company is financially sound and honorable in all its dealings, he should either keep his opinion to himself in the presence of an applicant, or else refuse to serve as an examiner.

We cannot avoid the belief that in the few instances which have been brought to our notice, the examining physician was not conscious of doing any harm by the statements which he made. We are confident, too, that if he had stopped for a moment to consider the possible harm he might do a needy agent, he would have quietly refrained from expressing his opinion.

OCCUPATION AND HEALTH.

That there are healthy and unhealthy occupations is known to all classes in society. What they really are, is, however, not so well understood. It is the duty of life insurance companies to ascertain what are healthy and unhealthy businesses. It is the work of the actuaries to clearly set forth what the rate of mortality in each occupation is, so far as that rate can be properly obtained. Considerable attention has been given to this subject in recent years, and we now know pretty clearly and definitely what occupations are attended with a high rate of mortality.

Perhaps the best paper on the subject, recently published, is one read at the Institute of Actuaries, in London, England, by Francis C. G. Neison, Esq., F.S.S., a leading member of the Institute.

Taking the census returns of Great Britain, giving the various occupations of the whole people, and the death-rate amongst those from 25 to 65 years of age, Mr. Neison has prepared tables of mortality setting forth the average deaths, per 1,000 persons living, in each occupation. Again, taking the returns of Friendly Benefit Societies with which Mr. Neison has been long conversant—he forms a similar table, which varies so little from the other as to be only confirmatory of it. The members of benefit societies are "select lives," examined by a medical officer. This would naturally give a rather lower death-rate than amongst the general community. The difference is, however, scarcely worth notice.

According to the census returns, Mr. Neison finds the mortality in various occupations to be as follows:

MORTALITY PER 1,000 PERSONS LIVING.

	Deaths to the 1,000.
Church of England clergy	10.02
Nonconformist clergy	10.01
Roman Catholic clergy	15.7
Physicians	12.6
Surgeons and Apothecaries	18.7
Barristers-at-law	10.9
Attorneys	16.2
Provision curers	16.8
Butchers	17.4
Poulterers	21.1
Fishmongers	17.4
Iron miners	13.7
Coal miners	14.8
Tin miners	16.1
Lead miners	20.3
Copper miners	24.7
Iron manufacturers	12.7
Paper "	13.0
Tin "	13.1
Nail "	13.2
Brass "	13.8
Glass "	15.8
Copper "	18.5
Lead "	19.3
Earthenware	19.7
Blacksmiths	13.8
Whitesmiths	16.8
Coppersmiths	17.1
Plumbers	18.3
Railway officers	12.8
" laborers	14.2
" porters	15.2
Engine drivers	16.3
Domestic gardeners	7.9
" grooms	9.8
" coachmen	14.7
" general servants	13.6
Beer-sellers	20.6
Wine merchants	23.3
Licensed spirit retailers	23.9
Inn and hotel keepers	26.8

It will thus be seen that the lowest death-rate occurs amongst "Domestic Gardeners," *i.e.*, gardeners who reside in the houses of their employers and are thus well cared for and well fed. The very highest death-rate is amongst hotel-keepers, who, though having little or nothing of any kind of labor to perform—living at their ease and partaking of the best food—yet die off at nearly quadruple the rate of domestic gardeners. Mr. Neison observes on this point: "Though no advocate of teetotalism, the table certainly presents facts of the utmost importance as to the influence of drinks and stimulants upon health. In every one of the different classes of drink-dealers, the mortality, it will be observed, is very high, being lowest for beer-sellers. Innkeepers and hotel-keepers appear as the least healthy. In no other class of results is such a high death-rate presented as amongst the various occupations connected with drinks and stimulants."

Amongst professional gentlemen the lowest death-rate is that prevailing in the ranks of the clergy. The Church of England and all other Protestant ministers die at a very little over 10 per 1,000 of all living at ages varying from 25 to 65 years. The Roman Catholic clergy die at the rate 15.7 per 1,000 of their class. They have in Great Britain the very poorest classes as their flocks. They visit these in every stage of disease and during the severest epidemics. Often they thus catch fever, small-pox, and other diseases, which cut them off. As a rule, too, they are not so comfortably cared for as Protestant ministers. The kindly hand of wife and child in the hour of sickness is more potent in restorative influences than the hands of strangers, be the latter ever so friendly and assiduous in their attentions. These circumstances will fully account for the somewhat high death-rate amongst Catholic clergy.

It is remarkable, too, that in the medical profession, while physicians die at the rate of 12.6 per 1,000, the surgeons and apothecaries die at a rate of 18.7 per 1,000. The two ranks of physicians and surgeons are

kept very distinct in England. The most eminent surgeon is merely styled "Mr."; the title "Dr." being only applied to physician. As a rule surgeons are more exposed to the various causes of death than physicians, and the result is seen in the higher rate of mortality amongst them.

Quite as remarkable is the mortality in the legal profession. The positions of attorney and barrister, like that of physician and surgeon, are quite distinct in the United Kingdom. The attorney does all the preparatory work in a suit, and lays the whole of it before the barrister. The clients in the case see the attorney and impart to him their facts. He prepares these for the barrister, who hardly every consults at all with the party in the suit. The barrister pleads in the open court and does all public work in conducting the case—the attorney sits in silence and supplies his superior with all documents. The heavy plodding, wearying office work, in close rooms often, is thus done by the attorneys: the lighter and more agreeable work by the barristers. The consequence is that barristers die at about the same rate as Protestant clergy, or 10.9 to the 1,000—while the attorneys die at the rate of 16.2 per 1,000; a heavier death-rate than that amongst many of the manufacturing classes.

Amongst all the workers in metals it will be observed that copper miners die off quickest; copper and lead manufacturers faster than those employed in any other manufacture; and coppersmiths somewhat in excess of any other smiths. This is the natural result of the deleterious influences of copper on the health of the human body.

Facts like these have led English Life Insurance Companies to be very cautious about insuring men engaged in certain occupations. There is hardly any respectable company amongst them now that will at all insure the lives of any class of liquor dealers. Some companies accept good, sound lives of hotel-keepers, and others of that class, at $2.50 extra rate per each $500 insured. The liquor traders generally object to pay this extra, so that, practically, no company now insures their lives. They established some years ago, themselves, "The Licensed Victuallers' Life Insurance Company," to meet this want, fancying their lives as good as any others. The death-rate was so great and the claims so many—none but drink-sellers being insured by the company—that in a few years it became bankrupt and had to be "wound up" in the Court of Chancery.

All persons engaged in mining occupations are, of course, charged extra for the risks. We think that, as these results of occupation upon health and longevity come to be more carefully analyzed and tabulated, the various life insurance companies must come to insure the different classes at various rates, corresponding to the mortality. It would, at least, be an interesting work just now for any actuary to engage in the preparation of equitable tables of rates, without profits, insuring all classes of lives according to the rate of mortality known to prevail amongst their ranks, according to occupation.—*Insurance Times.*

NEW MEDICAL EXAMINERS' BLANKS.

In the last number of the Record (October 15) we briefly alluded to the fact that two of the companies had adopted new forms of "application and medical examiner's report." Since then a third company has made a thorough revision of these blanks, and has adopted new forms which in the main resemble those now used by the "John Hancock," in which, as we have already stated, all the questions of a medical nature are printed on the side devoted to the examiner's report.

As many of our readers will be interested to know in what respects the blank intended for the medical examiner to fill out differs from those with which they have hitherto been familiar, we shall mention briefly the changes that have been introduced.

The first part of the medical examiner's report consists of a series of simple medical questions, which he is to put to the applicant, and which the latter, if he be a man of average intelligence, will be able to answer without the assistance of the physician. The two first questions are these: "Are you at the present time in good health?" and, "Do you ordinarily enjoy good health?" The third question reads: "Have you ever been predisposed to or had any of the following diseases or infirmities? (Answer *yes* or *no* opposite each)." Then follows the list of ailments, which in most blanks is incorporated into the application proper. To this list a few new items have been added, as for instance: dizziness, diarrhœa, delirium tremens, frequent desire to urinate, jaundice, lumps or swellings in any part of the body, open sores, pain in back (frequent or severe), swelling of feet or hands, and stricture of urethra. The next two questions are intended to supply any omissions that may exist in the foregoing list. The question relating to accidents is amended so as to read as follows:—"Have you ever met with any accident or personal injury, or undergone any surgical operation?" The questions relating to family history are preceded by a note in fine print, which reads thus:—"In stating the cause of death, avoid such expressions as "general debility," "change of life," "fever," "exposure," or any other indefinite term. If the expression "child-birth" is used, be particular to state how long after the delivery of the child, and also whether there were any symptoms of chest trouble, viz., cough, expectoration, loss of flesh, night-sweats, etc." The question relating to habits is broken up into a number of subordinate questions, as follows: "Have you *ever* used intoxicating liquors?" "If so state whether daily or occasionally, and explicitly to what extent." "Are you *now* in the habit of using intoxicating liquors?" "If so, state whether daily or occasionally, and explicitly to what extent." "Have you ever been intoxicated?" "If so, when last?" "Do you use opium in any form?"

The second portion of the medical examiner's report consists of a series of questions addressed by the company to the physician. They are as follows:—

"Have you carefully questioned the person examined concerning the matters mentioned in the foregoing questions, and are the statements given in reply apparently correct?" "Does he look older than the age stated; if so, how many years older?" (Here follow the data concerning height, weight, etc.) "What is your opinion of the influence of his occupation on the risk?" "What is your opinion in regard to his residence?" "Do you consider him acclimated?" "What is your opinion in regard to any former injury or sickness?" "Is there any indication that he is not now entirely well?" "Has he the appearance of a person addicted to the use of intoxicating liquor?" "Is there anything in his speech, looks, gait, or manner of conducting himself that would lead you to suspect that the party has any disease, organic or functional, of the brain or of any other portion of his nervous system, or any predisposition thereto?" "Has the party paralysis, cramps, tremors, atrophy or rigidity in any portion of his muscular system?" "Is the gait firm and elastic?" These

three last questions, it will be noticed, complete each other; the first one being rather general in character, the last two more specific. The subsequent questions relate to the organs of respiration and circulation, to hernia, to the urinary and other abdominal organs, etc., and differ in nowise from the questions now generally used for the same purposes.

Correspondence.

To the Editor of The Medical Record.

The question of medical examination for Life Insurance has really become so important with the numerical increase of these institutions, that everybody who has any connection with this business ought to contribute his share, so that the public, and especially the managers of those companies, may find out how to improve this most important branch of their business.

As I have been connected with Life Insurance as medical examiner during the past four years, I have taken a more than ordinary interest in the last move of your paper, and I thought that I should give you my view on a few points that have not been mentioned before, and which I think are more important for the solution of these questions than all the others. While the majority of your correspondents enlarge upon the relation between the agents and medical examiner, and give hints how to make the latter more independent of the former, I intend to go a little further into the matter itself, and speak of the making up of the blanks for the medical examiner (which are about the same in all companies). There are questions that ought not to be there, while other and more vital points are omitted. There are questions put in a way to which no answer in a really scientific way could be given, and there is altogether no room left to the examiner to give his opinion of the case as a whole. His simple, short answers to the short questions are sent in to the home office, and applications are accepted, because there was no spot on which the doctor could give a declaration upon some question; and other applications are rejected on the ground that some of these short answers do not tally exactly with the opinion of the medical or other board. I should recommend that a thorough revision of these blanks be made, and that in the new ones there might be questions taken up according to the present standard of medical science; and secondly, that more space and freedom be given to the examiner in sending in his opinion on the acceptability of an application.

To be sure it would then be necessary to be rather more careful in the selection and appointment of the medical examiner; for heretofore, when any medical man was recommended by an agent (because he was his friend or perhaps his partner in business), he was taken, and appointed to this responsible office.

Select from among the profession men of experience in practice, and of undoubted integrity, and so compensate them that they will consider themselves well paid for a hard task, and I am sure they will take the most pains to serve the company honestly without regarding the interest of any agent, and save many a mortification to the life insurance companies.

The second point I am thinking of is, that the medical examiner is often obliged to visit the applicant at a late hour of the night, when he finds him just returned from hard bodily work, worn out, hungry, and sometimes not in the best of humor, and then he expects to get a just and correct opinion of the health and constitution of the applicant. Then it will happen that a man just taken away from his evening meal, half frightened at the sudden visit of the doctor, presents a pulse of 90–100, and perhaps even some undulations of the beats of the heart, which are not natural to him.

No! Let every applicant prepare himself, and go to the office of the examiner, and present himself at a time when he is quiet, not overworked, when his mind is at ease, when he takes his time to be examined—and it will be an easy matter for the right examiner to make up his case correctly.

But who is going to take the initiative to correct all these shortcomings of the old plan? Has any step been taken to arrive at some understanding, in which way to make these reforms? I do not think so. Would it not be right if one of the profession connected with life insurance would issue a call for a meeting of the most prominent amongst these gentlemen, in which all these questions could be discussed and brought to a certain and more profitable condition? I should advise you, Mr. Editor, since you have already taken up this question, to try if you could not act on these suggestions, and bring these matters to an issue.

H. L.

New York, Sept. 20, 1873.

Miscellaneous.

Excessive Weight.—Medical examiners occasionally meet with cases like the following, which occurred during the past month:

The applicant, a stout, healthy-looking man of 62, was brought before the medical examiner by one of the company's regularly appointed agents. The questions in the application had all been answered favorably. He had had no previous sicknesses, had never been rejected by any company, and his family history was good. His pulse was of good volume, 68 to the minute, and perfectly regular. His height was 5 ft. 3 in., and weight 182 lbs., most of it being concentrated about the abdominal region. There was no fulness of the vessels in the region of the neck and face;—in a word, he had every appearance of a man who was temperate in his habits and enjoyed habitual good health. Nevertheless the examiner refused to carry the examination any farther, on the ground that the man's excessive weight was a sufficient cause for rejection. The applicant then inquired why his weight should render him less likely than other men to live out his full expectancy. The reply was, that, other things being equal, excessively heavy men were more liable to die of apoplexy. "Well, I guess you are about right, doctor. Since your mind is made up not to accept my application I might as well tell you that three or four years ago I had a kind of apoplectic attack, followed soon by a second. I at once commenced to live on plain, wholesome food, and ate always in great moderation; and since then I have had no trouble of any kind."

Rules regarding weight and family history often operate unjustly, but that they occasionally save the company a few thousand dollars is rendered highly probable by the instance just related; for it can be safely assumed in this case that the applicant is not at all likely to live five years longer, much less the thirteen expected.

Physical Aspects of Primogeniture.—Dr. J. Stockton-Hough's article on the "Physical Aspects of Primogeniture" will not appear in this number of the Record, as already announced, but in the Dec. 15th number.

Original Communications.

SOME OF THE

THERAPEUTIC USES OF COLD WATER IN THE TREATMENT OF HYPERPYREXIA AND OTHER MORBID STATES.

WITH CONTRA-INDICATIONS GROWING OUT OF INSUFFICIENT HEART-ACTION, ESPECIALLY IN PNEUMONIA.*

By SAMUEL G. ARMOR, M.D.,

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The use of cold water as a therapeutic agent dates from an early period in the history of medicine. It is an old remedy, and it is therefore difficult to say much about it that is new. Indeed this is not my ambition, as my paper abundantly proves. I rather seek to attract attention to the use of cold baths in *lowering excessive heat of the blood*, and to present some facts bearing upon the general subject of hyperpyrexia.

Before reaching this point, however, I desire to say a word as to the mode of action of the cold bath, or cold douche, on the human organism: for it bears directly upon the varied action of the remedy as a therapeutic agent.

A simple mechanical view of its action has so long occupied the popular mind, that the physician often encounters great and unfounded prejudice in its use. Fear is expressed that it will "drive in the disease," or that the patient will "catch cold" from the sudden shock of water applied to the surface. All these notions are derived from physics, and the laws of dead and inorganic matter, and should find no place in the mind of any intelligent physiologist. For if it be true that the fluids are driven from the surface on one occasion and drawn to it on another, just as if the skin represented two sides of a hydraulic machine, why is it that we use the cold dash, or cold applied in some form, to arrest internal hemorrhage? Anatomically we find no direct vascular connection, for instance, between the skin and the uterine blood-vessels. There intervene skin, cellular tissue, superficial fascia, cellular membrane; again, deep-seated fascia, muscular tissue, peritoneum, etc. How, then, does cold applied to the surface constringe deep-seated blood-vessels? Evidently through an excitant and constringing influence reflected from nerve-centres.

Between the skin and mucous membranes everywhere there is an evident nervous connection. Anatomically and physiologically they are also closely identified; so that an excitant impression upon the skin is directly communicated to mucous membranes. This is sometimes explained by the vague term "sympathy." We rest satisfied with the general statement, that parts having similar anatomical structures have similar functional activities, and that when diseased, they "sympathize" with each other. The true explanation, however, in this case is based on the law of reflex nervous action. An excitant impression made upon the sensory nerves of the skin is communicated, first, to nerve-centres, and from thence reflected to the vaso-motor nerves which so abundantly supply capillary circulation. And this impression is readily communicated to mucous membranes; perhaps for the reason already stated, namely, similar anatomical resemblances; and when we remember that internal hemorrhage usually takes place from mucous membranes, the action of cold as a hemostatic becomes at once apparent. The hemorrhage is arrested by reflex contraction of the capillary blood-vessels.

In this respect cold resembles somewhat electricity and galvanism, and this is especially the case in what is called "transition baths," as practised by the Greeks and Romans of ancient times, and recently revived in our own country. By means of sudden alternations of heat and cold, the extensive network of cutaneous sensory nerves is brought into relation with the vaso-motor, nutritive, and secretory system; passive congestions are dispersed, and nutrition improved. Its action as an anti-congestive remedy is not unlike quinine. Indeed, according to the observations of Dr. L. Fleury, a congested spleen or liver will sometimes rapidly diminish in volume under the use of the cold douche. And Brown-Séquard says that, in a series of carefully conducted experiments made some years since, he found that dipping one hand into water at freezing-point produces in the other considerable contraction of blood-vessels. These experiments led to the alternate use of cold and hot water in the treatment of *spinal affections*. "I have often," he says, "applied with benefit cold and hot water to the spine, with the view of producing contraction of the blood-vessels of the spinal cord." And he speaks also of deriving benefit from alternate applications of ice and hot poultices in the treatment of neuralgia, and expresses the opinion that it operates remedially by "modifying the nutrition of the nerve-centres, and particularly the base of the brain."

The same treatment is advocated by Dr. John Chapman, in *The Medical Times and Gazette*, July, 1863, and in *The Year Book of Sydenham Soc.* He claims to have discovered that "a controlling power over the circulation of the blood in the brain, in the spinal cord, in the ganglia of the sympathetic system, and, through their agency, in all the organs of the body, can be exerted by means of applying ice and hot water to different parts of the back." He speaks with much confidence of this plan of treatment in varied affections of the nervous system, such as *epilepsy and paralysis, disordered menstruation, constipation, coldness of the surface, etc.*

Following the suggestions of Brown-Séquard and Chapman, I have been in the habit, for years, of recommending either the local shower-bath, or the "transition bath" (hot and cold), to the base of the brain and upper part of the spinal column, as a *general nerve tonic*, and I have found it useful in strengthening the body. It is true I have generally advised it in connection with iron, quinine, and other tonics. But as a nerve tonic in cases of general debility, it perhaps more than any single measure lessens morbid sensibility to the impressions of cold, and aids in giving permanent firmness and steadiness to nerve-action generally.

I have alluded to the well-established effects of cold in the arrest of hemorrhage, and to the probable facts as to its mode of action. Indeed, the proofs of the reflex influence of cold water upon blood-vessels at a remote point are among the most valuable recent contributions of physiology to therapeutics, and they furnish, in my estimation, a reasonable explanation of the action of the same remedy in *inflammatory* affections of deep-seated organs. In the more superficial inflammations, where cold can be continuously applied, there can be no doubt of its benefit when resorted to with judgment and discrimination. It is, of course, only applicable to the early stages of inflammation, with marked elevation of temperature, and absence of any sense of chilliness. We should rely

* Read before Kings County Medical Society, Brooklyn, N. Y.

greatly, in its use, upon the *thermometer* and the *sensations of the patient*.

Of late years, belief is gaining ground in the efficacy of cold applications in the treatment of inflammations of *serous tissues*. To every practitioner the practical question presents itself as to whether he shall apply hot or cold applications in the first or forming stages of these inflammations. Some are partial to one, some to the other. As a rule, German practitioners resort to cold applications. "At the commencement of an attack of pleurisy," says Niemeyer, "I cannot sufficiently recommend the use of cold and of local blood-letting." And in acute peritonitis, he says he has seen "the best results, in cases that were amenable to any treatment, from covering the entire abdomen with cold compresses, and renewing them every ten minutes." He regards leeches to the abdomen, the use of cold, and the internal administration of opium, as the most effective treatment.

It must be remembered, however, that, in all cases of peritonitis, the tendency to death is at the heart, and increased feebleness of heart-action, as I shall more fully state in a moment, contra-indicates the use of cold to the surface, without at least giving stimulants at the same time.

Prominence has been recently given to this point in considering the use of the cold bath, or cold applications, in the treatment of *pneumonia*. Its use may, however, be exceptionally dangerous in this disease. What, then, is the danger in pneumonia? And can the objections to the use of the cold bath, as a general antipyretic, be in any way overcome? These are interesting practical points, and can be answered only by a clear comprehension of the natural history of the disease under consideration. This I can state only in brief.

In a somewhat general sense, then, pneumonia presents two main points for our consideration: 1st, *Restriction in lung function*; 2d, *Fever*. There are other points of interest, but these are the ones with which we are chiefly concerned at present. Now, what relation, it may be asked, does the local lesion sustain to the general constitutional condition of the patient—in other words, to the fever? And what relation does the fever sustain to the heart-action?

This whole subject is ably discussed in a recent clinical lecture by Prof. Jürgensen, of Kiel (Prussia). He maintains the position that the immediate cause of death in pneumonia is "insufficiency of heart-action." I cannot give, at length, the ingenious process of reasoning by which he arrives at this conclusion. Briefly stated, it is something like this: The pneumonic exudation affects an increased resistance to the lung circulation, and therefore imposes a greater demand for work upon the right ventricle. This increased resistance to the circulation of blood in the lungs causes correspondingly increased labor of the heart in order to effect a complete exchange of gases. The *high temperature of the blood*, according to Prof. Jürgensen, is an important and dangerous element in pneumonia, as in many other forms of disease. With the rising of bodily heat, rises the frequency of the pulse; the laboring time of the heart is increased, and the time of rest lessened; carbonic acid is increased beyond the normal amount, and must be eliminated quicker than in health. This requires, of course, increase in the force of the heart and the respiratory muscles.

But the fever, we are told, leads to "degeneration of the muscular fibres of the heart," and lessens its power at a time when it is already overtasked by its efforts to overcome the resisting pulmonary exudate. Now this loss of contractile power, growing out of failure of nutrition in all high febrile states, will be the most severely felt in those parts whose expenditures are the greatest, and these are the constantly laboring muscles—the heart and the respiratory muscles. Hence the great danger, in pneumonia, of the heart losing its contractile force. This, according to the views here presented, is the "dead point of danger"—not so much the local disturbance in the lungs; else why, inquires our author, do we find, soon after the natural crisis has set in, say the fifth or seventh day, such marked subsidence of all subjective phenomena, notwithstanding the continued infiltration of lung-substance? "*The fever*," says Jürgensen, "*is the most dangerous enemy of the heart* . . . . *With the cessation of the fever, the power of the disease is broken.*"

How, then, shall we subdue the fever, which is the "dangerous enemy in pneumonia?" Shall we resort to cold applications, as in pleurisy, peritonitis, etc.? In the hospital at Prague we are told that "every acute sthenic pneumonia is treated with cold compresses;" and Smoler says, "it is exceptional for a patient not to feel material relief from this treatment." And Niemeyer has made extensive employment of cold in "croupous" pneumonia, as in pleurisy and peritonitis, and, relying upon a large number of very favorable results, says he can recommend the practice.

Prof. Jürgensen is also partial to cold water as a febrifuge. He states that, to his knowledge, nobody has employed the bath so frequent, so cold, and with such untiring energy, and that he has never had any reason to regret the practice; and yet no one more clearly recognizes than he *à priori* objections that may be raised to the cold bath—that is, if not accompanied by the use of stimulants. What are some of these objections?

In the first place, contraction of the vessels of the periphery, caused by the cold bath, brings on increased resistance to the blood-current, and with it increased labor of the heart, which, we have seen, is already enfeebled by the fever, by increased labor, and by increased resistance in the consolidated lung-tissue.

That during a cold bath, therefore, a fatal collapse may ensue in pneumonia is a clinical fact of great practical importance—one that is to a certain extent exceptional; and hence the prominence I have given to the subject in this connection. Under no circumstances should cold baths be resorted to in pneumonia, in cases of aged people, very fat people, debilitated people, and finally those suffering from heart-disease. And, if none of these considerations forbid its use, the heart-action should always be supported by stimulants at the time of the bath. Of these I will mention alcohol as most rapid in its action; quinine, as the most permanent. If there is any doubt as to the failure of heart-action, quinine is the remedy above all others, for the reason that while it diminishes temperature, it tones and strengthens at the same time the tailing muscles of the heart. As a general febrifuge and cardiac stimulant, digitalis should also be mentioned in this connection as a valuable addition to the quinine. But, with a purely antipyretic method, Liebermeister claims to have brought down the mortality in "croupous" pneumonia from 24.4 per cent. to 8.8 per cent. But the value of this exclusive treatment certainly requires to be confirmed by further experiment before it can be generally received. Moreover, our pneumonias in this country vary so greatly in their type, and in different localities, that all exclusive modes of treatment are out of the question. Indeed, quinine and stimulants are, in many cases, indicated from the first.

I have dwelt mainly upon the uses of the cold bath in the more inflammatory types of pneumonia, because it brings up the question of *excessive blood-heat* upon the body, and especially—for reasons suggested—upon the *heart* and *respiratory muscles*.

It cannot escape the attention of the general professional reader, that growing attention is given to the danger resulting from simple *increase of bodily temperature*. Without discussing the question as to the cause of the fever, we are beginning to discuss its effects upon the organism as a dangerous element of disease *per se*. Trousseau says: "Few persons recover from enteric fever if the temperature exceeds 105°." This may be too dogmatical in its statement, but it is an approximation to the truth. Fever is a dangerous element of itself, and it is beginning to be more and more recognized as such. In typhus, typhoid, and other infectious diseases, "the greatest danger," says Niemeyer, "is from the severity of the fever." This danger he regards as a double one. On the one hand, the increase of the bodily warmth above a certain point—say 108°—"induces paralysis of the heart and renders life impossible;" while, on the other hand, "continued increase of the production of heat, or increased tissue metamorphosis, induces consumption of the body of the patient." The exhaustive effect of the fever is compared to that of excessive bodily fatigue.

In the treatment of these fevers, Niemeyer urgently advises the *abstraction of heat*, and speaks of cold affusion, or the cold bath, as one of our most valuable antipyretic agents. This will be recognized, however, as an old remedy in fevers. It was a favorite with Galen, and still more so with Currie; and, at a later period, with our own countryman, Nathan Smith. At the present time Niemeyer and others urge only what Currie so enthusiastically wrote about during the latter part of the last century. His *Medical Reports on the Effects of Water, Cold and Warm, as a Remedy in Febrile Disease*, are among the most eloquent contributions to the professional literature of his time, and his recommendations have been followed with much success. Armstrong, who wrote so well on fevers at a later period, speaks no less enthusiastically of the febrifuge virtues of water. He adopted, substantially, Currie's mode of using it.

Niemeyer has somewhat modified his mode of using cold water. Formerly, when the bodily temperature had risen to a dangerous height, and there was occasion to lower it, he had his patients "wrapped in cold wet sheets, and the proceeding repeated at intervals of ten to twenty minutes until the desired end was attained." But, observing that there was occasional exhaustion along with the retardation of the pulse, he more recently doubted the propriety of such sudden and persevering abstraction of heat. He raises the question, very properly I think, as to whether it is not possible to exhaust the patient by an "excessive increase of the production of heat," comparing it, as already stated, to the effect of excessive bodily exercise. He now resorts to less sudden and less energetic abstraction of heat than formerly. His plan is substantially that recommended by Ziemssen: "As often as the temperature rises above 104° the patient is placed in a bath whose temperature is about 10° below that of his body, or about 95°." The temperature is gradually reduced to 68°, the patient remaining in till he is slightly chilled. He is then placed quickly in a warm bed. This is repeated at first four or five times a day; subsequently it is reduced to two or three. If quinine is used in two or three grain doses at the same time with the abstraction of heat, he thinks we are not obliged to use the baths so often.

In the inflammatory stage of our autumnal or remittent fevers, in which there is marked elevation of temperature, with dry, hot skin, cold affusion frequently proves to be a valuable sudorific. My experience with it in this class of fevers in the West and South-west has been extensive, and I can speak, therefore, with confidence as to the value of the treatment. In all malarious forms of remittent fever the exacerbations are characterized by very sudden and marked elevation of temperature. It is not unusual to find a temperature of 105° or 107° during the first or second paroxysms of the fever. Now, practically it is found extremely difficult to produce diaphoresis by drugs when there is such excessive heat of skin. A patient rarely sweats at a temperature above 102°. The degree of heat called the "sweating point" is essential, and nothing secures this so well, so speedily, and so surely as affusions of cold water. Shower a patient at 105° or 106° until he feels a slight sensation of chill, then wrap him in warm blankets, and, as a rule, he will sweat profusely. I have arrested many simple malarious remittent fevers by one or two cathartic doses of calomel, the free use of cold water during the pyrexia, followed by large anti-periodic and febrifuge doses of quinine. If the temperature in these fevers is 104° or more, skin dry and hot, pulse frequent, brain excited, and back aching, I am confident we give our patient the speediest relief in the shortest period and simplest manner by cold affusion. It rapidly lowers the temperature, and tends to the production of free perspiration.

Among the exanthematic fevers, the temperature of the skin is perhaps hotter in *scarlatina* than any others, and in none do we derive greater benefit from sponging or the cold affusion of water. Currie was of opinion that it "extinguishes scarlatina," preventing the eruption, and arresting the further progress of the fever. He considered it applicable only to the forming stage of the more sthenic forms of the disease, when the temperature was from 105° to 108° F. His plan was "to strip the patient and dash four or five gallons of the coldest water to be procured over his naked body." The affusion was repeated as the obstinacy of the fever indicated.

Many practitioners, of later date, have followed the suggestions of Currie. Dr. Laycock, of Edinburgh, has resorted to cold affusion and the wet sheet with very marked advantage; and I believe the profession everywhere to-day, although perhaps less enthusiastic than Dr. Currie, regard the practice with favor. When the febrile action is free and strong in the inflammatory or anginose form of the disease, the little sufferer, restless, burning with fever, and exhausted for want of sleep, will often perspire freely and fall into a sweet slumber after the use of the bath. If there is any doubt as to the propriety of further use of the shower bath, or sponging with cold water, the inunction of oily substances, or sponging with tepid water to which small quantities of glycerine are added, may be substituted.

If the time allotted to the present paper permitted, I might multiply instances of the value of cold water in all *overheated conditions of the blood*. The testimony is constantly increasing and becoming more specific on this point. Wilson Fox, M.D., Prof. of Clinical Medicine in University College, London, has recently published an exceedingly interesting monograph *On the Treatment of Hyperpyrexia, as illustrated in Acute Articular Rheumatism, by the external Application of Cold*. The dangerous effects of excessive temperature have specially claimed his attention. In a carefully observed series of cases, he found that when the temper-

ture suddenly rises from 103° or 104° to 107°, 108° or 109°, the case usually proved fatal within one or two hours after the temperature of 109 had been attained. This sudden rise of temperature is regarded by Wünderlich as one of the phenomena of death; indeed it often continues, and sometimes increases, for one or two hours after death.

Fox publishes a number of cases, in which, by repeated immersions in the cold bath, life was protracted for nearly thirty-six hours after the temperature in acute rheumatism had reached 109°. But, notwithstanding the great and imminent danger of sudden and high rise of temperature, he reports many cases in which rapid fall of temperature and recovery followed the cold bath. One case is specially notable from the gravity of the symptoms, which indicated speedily approaching death. The temperature rapidly rose from 107.1° to 109.1°, when the patient became entirely unconscious. She was put in a bath of 96°—"unconscious, pulse imperceptible, the face in the highest degree cyanotic, and the breathing such as commonly precedes the act of death." In five minutes after she was in the bath, the temperature in the rectum was 110°. Ice was placed on her chest and on her abdomen; a bag filled with ice was also placed to her spine. Within fifteen minutes the temperature in the rectum had fallen to 109.1°, in five minutes more to 108.4° (the average temperature of the bath being then 66°); and thus it continued to fall. Within an hour and a half from the time she was put in the bath, the rectum temperature was 99.5°, the circulation was restored, and consciousness had returned. Brandy was freely given; the patient took six ounces within an hour. The subsequent treatment consisted in resort, from time to time, to the cold bath, and the application of ice, as before, to counteract returning elevation of temperature—the free use of quinine, brandy, beef-tea, milk, and eggs. At the end of a week "the patient sat up in bed, and ate a boiled sole for dinner." In this case—and it only illustrates many others—the immediate cause of the dangerous symptoms was undoubtedly the *sudden elevation of temperature.*

I cannot follow out the many interesting observations of Fox in the use of the cold bath in the treatment of hyperpyrexia, especially in acute articular rheumatism. His records are among the most interesting of modern medical literature, and clearly demonstrate that, so far as we at present know, the application of cold to the surface stands unrivalled as an antipyretic in all cases of excessive elevation of bodily temperature.

I have thus far, it will be observed, spoken of the uses of cold water as a hemostatic, a general nerve-tonic, an antiphlogistic, and a general and most valuable antipyretic. But the advantages of modern hydropathy are perhaps more clearly illustrated in the treatment of *abdominal affections* than any others. Many such cases have been over-drugged, their nervous system disturbed, their digestion impaired, their nutrition at fault; or perhaps they may be worn out from habits of dissipation and luxury. What they often need is what they will not, as a rule, submit to in private practice, namely: a thorough system of *hygiene*;—sunlight, fresh air, systematic exercise, the shower bath, the douche, the pack, frequent draughts of pure cold water instead of more doubtful beverages, simple diet, milk, brown bread, and rest of body and mind, such as they find at the best hydropathic institutions of the country. These hygienic agents, intelligently administered, often effect cures when drugs alone had failed—when, indeed, drugs are positively injurious.

But the varied therapeutic uses of water, and the several plans of application, such as by *irrigation, ablution, affusion*, the *douche*, the *shower bath*, and the *pack*, do not come within the general scope of this paper. It has been my object, mainly, to revive the discussion of an old subject, and especially to attract attention to the use of the cold bath in all cases of excessive and dangerous elevation of temperature. In our eager search for "new remedies," we are prone to forget old ones, and especially such as nature furnishes us so bountifully as water. Some of us, of late years, in our enthusiasm of progress, have almost forgotten, if we ever knew, that Currie and Armstrong, and Jackson and Forbes and Smith wrote so well and so truthfully about the virtues of water.

Attention is directed in the paper to the following points:—

1st. That the therapeutic action of water, as a hemostatic agent, is mainly and primarily upon the nervous system, and through that upon the capillary blood-vessels.

2d. Its direct action as a sedative in the treatment of some forms of inflammation, with suggestions as to its mode of application.

3d. Some points in the natural history of pneumonia, the effect of *excessive temperature*, especially upon the heart and respiratory muscles, and the necessity of using cardiac stimulants when resorting to the cold bath.

4th. The danger, in the essential and other forms of fever, from the *increase of bodily temperature per se*, and its effects in producing paralysis of the heart; together with the value of cold baths or spongings in such cases as an antipyretic.

5th. And lastly, the uses of the shower bath, the douche, and the pack as general hygienic agents in the management of chronic, abdominal, and nervous diseases.

In my hurried presentation of the subject, I have purposely avoided detailed statements as to the mode of applying cold water in medicine. Nor have I dwelt upon its dangers other than in pneumonia. All these questions I leave to the individual judgment of the practitioner, trusting that the merits of the remedy may secure for it the consideration it deserves. As a remedial agent it has been subject to great vicissitudes of fortune; and that its virtues may have been greatly exaggerated in the past, is no reason why we should allow a valuable remedy to fall into comparative disuse.

A CASE OF TORTICOLLIS; ILLUSTRATING SOME PRINCIPLES OF TREATMENT.

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On the nineteenth of January, 1869, E. M., a boy of eleven years of age, was brought to Dr. C. Fayette Taylor for the treatment of torticollis on the right side. His parents attributed the deformity to an exposure to cold, which had occurred when he was about three years of age; but, from the character of the distortion, together with the fact that there was an obscure history of an abscess in the neck, which was reported to have discharged in the early period of the affection, it was suspected that inflammation might be progressing slowly at the fifth or sixth cervical vertebra, although there were few constitutional signs of Pott's disease. For the sake of security the appropriate treatment for the latter disease was at once commenced, and the proper mechanical apparatus was worn for several

months. The wry-neck, however, was not cured, and further mechanical treatment was suspended.

On the fifth of April, 1873, E. M., now aged fifteen, was brought again to the office by his parents, with the request that we should assume the treatment of the case. Five days previously a homœopathic surgeon had performed an operation upon the contracted muscles, with the view of overcoming the deformity; but no perceptible improvement followed, and they came to us for further advice and treatment. An examination showed that this operation had been incomplete. The clavicular branch of the sterno-cleido-mastoid muscle had been only about half divided, and there had been no attempt to divide the sternal branch. The wry-neck, of course, still existed. There was a decided inclination of the occiput forwards and to the right, while the chin looked upwards and to the left. By an effort he could straighten the neck, and bring the median line of the face to its normal position, but, in so doing, the sterno-cleido-mastoid muscle on the right was rendered tense and prominent, and the right shoulder was elevated. The movements of lateral flexion and of rotation to the left were restricted to nearly one-half of their proper extent. The features all showed the effects of the prolonged continuance of the abnormal position. The right half of the face was slightly smaller than the left, and on that side the eyebrow and lid, the nose and the angle of the mouth inclined slightly upwards. The right sterno-cleido-mastoid muscle was thickened and shortened, while that upon the left side was flattened out and attenuated; and in these changes the clavicular portions of the trapezii participated to some extent. The scapular muscles, especially the rhomboidei and the trapezius, were found to be slightly larger on the left side than on the right; but this might be accounted for by the fact that he was naturally left-handed. The scapulæ were of the same size, but the inferior angle of the right hung an inch lower than that of the left sides and pointed outwards and forwards. The right clavicle was half an inch higher than the left at the sternal articulation, having been pulled up by the shortened sterno-cleido-mastoidens. Beyond these there were no apparent variations in symmetry between the two sides of the body. The firm, well-developed chest had resisted the action of the contracting muscles, and the spine did not present the compensatory curves which are usual in cases of torticollis of long duration, especially in girls.

It was evident that another operation would be necessary before any mechanical treatment could be used with success, and on the sixth of April Dr. Taylor, assisted by Dr. Chrystie, thoroughly divided subcutaneously the right sterno-cleido-mastoid muscle. An apparatus to reverse the position into which the deformity had thrown the head, and thus to maintain a separation between the divided ends of the muscle, was applied as soon as the effects of the anæsthetic had passed off, and this was worn, night and day, during the following three weeks. The day after the operation an exercise of the muscles of the neck was commenced. At first it consisted of passive movements, but soon active exercises were substituted, and continued to be used for about ten minutes twice a day. On the fourteenth of April a special faradization of the left sterno-cleido-mastoid and the right trapezius and rhomboidei muscles, together with a general application over the muscles of the back and neck on both sides, was added to the previous treatment. The patient progressed so rapidly under this combination of therapeutic means, that on the twenty-eighth of April, twenty-two days after the operation, he was allowed to suspend the treatment for three days, with the exception of the mechanical apparatus, which he still continued to wear during the day and night. Upon his return it was found that the rigidity on the right side in lateral movements and rotation of the head had increased somewhat, and the former treatment by active and passive exercises, together with electricity, was resumed, and continued for ten days longer. The flexibility of the neck at the end of that time was completely restored, and although there was still a decided difference in development between the sterno-cleido-mastoid muscle on the two sides, there had been so much improvement during the month's treatment that he was discharged, with the recommendation to wear his apparatus during the day for two or three weeks longer and to keep up certain prescribed exercises for the purpose of acquiring facility in rapid movements of the head. He returned for examination twice, at intervals of two weeks, and was found to be improving so steadily in power and control of muscular action, that no further treatment became necessary.

The diagnosis of wry-neck, as this case shows, is not always an easy matter. The congenital and the paralytic varieties, together with the traumatic distortions of the neck which result from loss of tissue after burns or wounds, do not usually present any great difficulties. Spasmodic torticollis, however, associated as it is apt to be with obscure derangements of the central nervous system, often involves very serious questions of diagnosis. But that form of wry-neck which sometimes accompanies, and becomes a prominent symptom of, inflammation of the cervical vertebræ, is perhaps more important than any other in its relations to diagnosis, prognosis, and treatment. Disease of the spine in this location is rapidly and almost inevitably fatal, where it is left to itself; while under a proper and carefully conducted mechanical treatment it is, to say the least, quite as amenable to the orthopædist's skill as the disease is found to be at any other region in the spinal column. Its early recognition is therefore of the utmost importance. A tendency to hold the head on one side should always arrest the attention of the physician, and in every case whose history is in any way obscure, it should receive a special investigation. When the deformity depends upon disease of the vertebræ it is met with as an early sign, because it arises from the instinctive tonic muscular contractions which are set up to prevent movement at the seat of disease. The position which may be assumed by the head, as a result of this involuntary muscular act, varies greatly. It is by no means always flexed and rotated, so as to resemble the ordinary wry-neck, and, indeed, can readily be distinguished from it, in most cases, by an experienced observer. But sometimes this is not so easily done, and then an error in diagnosis may bring about disastrous results. Tenotomy and passive movements in a torticollis from Pott's disease must do harm, and might result in death. The diagnostic value of torticollis in relation to disease of the cervical vertebræ depends greatly upon its association with additional symptoms. Pain is almost always an early sign. It may be felt in the chest or abdomen, though a more usual seat is in the back of the neck and base of the skull. It is not uncommon to find a severe, steady ache, extending from the neck down the arm. Sometimes the pain is steady and sometimes paroxysmal, but motion always tends to aggravate it. Next there are symptoms which indicate irritation of the nerves that preside over the respiratory function: such as hiccough and paroxysms of coughing. These are very characteristic when they occur. Then there are a series of physical signs by which the diseased tissues express

their need for rest. The peculiarly distinctive attitude which the patient assumes during locomotion and the straightening of the normal dorsal curve of the spine are striking instances of an unconscious effort to protect the seat of disease from movement and shock. If the affected point be as low as the seventh cervical or first dorsal vertebra the respiration is apt to be short, jerky, and incomplete, because full inspirations would bring about motion through the costal action, and increase the pain. To this class of symptoms belongs the fixed position of the head which we are considering. Sometimes its relation to disease of the cervical vertebræ may be determined by observing, in addition to other signs, that the patient supports and steadies his head by his hands, or tends to lean against support whenever he can; but often the diagnosis presents difficulties which large experience and cautious tentative treatment can alone resolve.*

The treatment of this case of torticollis comprised a variety of therapeutic means. The surgical procedure of myotomy was regarded as a necessary preliminary, on account of the duration of the existing deformity. In some of the cases of congenital wry-neck, and in that form which arises after exposure to cold, it is sometimes possible in the early stages to remove the deformity by means of electricity, manipulations, frictions, or active exercises of the muscles of the neck; but usually the cases which present themselves for treatment have existed for so long a time that secondary changes in bone, ligament, and muscle have taken place which are not likely to yield to these mild measures. In two cases of torticollis in children, arising after an inflammation following exposure to cold, I have faithfully tried the effects of manipulations and exercises alone, without perfect success. One was of six months' duration when the treatment was commenced, and, though it was continued for eight weeks with decided benefit in increasing movement and in allaying muscular spasm, which previously had been developed whenever voluntary motion of the head away from the contracted side was attempted, still the cure was by no means perfect. The second case was also of about the same duration, and the treatment was continued for a month with a similar partially successful result. The indication for myotomy is plain whenever the structural changes have advanced so far as to transform the normal elastic muscle into a shortened, unyielding band. The operation, under ordinary circumstances, when performed with care, is not a dangerous procedure, and by its employment the patient may be helped, in a few seconds, over ground which weeks of treatment by less radical measures might fail to secure.

Next in order comes the mechanical contrivance for holding the head properly after the operation, and preventing a return to the abnormal position. The instruments which are sold in the shops and described in the text-books as applicable for this purpose, are, as a rule, constructed without due regard to the instability of the head upon the neck. A traction is usually exerted upon one side or the other of the head by means of elastic bands, adhesive plaster, or metallic rods, from some unstable point of attachment on the shoulders or trunk; but sufficient care is not taken to prevent the patient from disarranging the contrivance in his efforts to avoid an irksome confinement. This is objectionable even in the simplest cases; but in cases of long standing their defective construction renders them practically useless. In females and in boys of delicate frame, the spinal column eventually becomes bent as a result of the permanent contraction of the muscles of the neck, and a secondary lateral curvature results. The clavicle and mastoid process are approximated by the shortened muscle, and, in the efforts of the patient to keep the face in a vertical position, the shoulder is elevated and the dorsal spine is curved convexly towards the side on which the contracted muscles are situated. In the treatment of such instances the chief mechanical problem consists in securing the shoulders and upper part of the cervical vertebræ in such a way as to prevent this bending of the spine, when force is applied to the head to antagonize the contracted muscles. But the mechanics, in their ignorance of anatomy, entirely overlook this point.

The following figure illustrates the form and mode of action of the mechanical appliance which Dr. Taylor devised to counteract the deformity, after the sterno-cleido-mastoid muscle had been divided by the knife. It will be borne in mind that in this case the spinal complication, to which reference has just been made, was not present.

The fixed point upon which the effectiveness of the whole instrument depended was a padded fulcrum (B), which rested upon the left side of the neck, close to the base of the skull. From this a curved piece of steel passed upwards behind the ear and over the crown to the right parietal bone, where it pressed upon the scalp by means of a padded plate (A), being held in place by a strap which encircled the head. In order to exert a constant force upon the point A, there passed downwards from the fulcrum B another curved steel piece, and this terminated in the bow, which is seen in the figure, passing over the shoulder, *although not resting upon it*. The arms of this bow were therefore levers, acting at the point A through the fulcrum B; and it can readily be seen that by tightening or relaxing the strap C, which passed from the extremities of the arms of the bow around the chest, the amount of force to be exerted at A could be graduated with precision. If the bow had rested upon the shoulder this could not have been done, but as the instrument did not touch the person except at the points A and B, a traction exerted upon the extremities of the arms of the bow could be directly transmitted to the point A. When applied, this contrivance was practically immovable, and the patient could not by any possibility rotate the head or bend it laterally to the right.

Many surgeons rely in the treatment of torticollis sole-

* For a full account of the diagnosis of disease of the cervical vertebræ, see THE MEDICAL RECORD for Sept. 15th, 1873, p. 413. Paper by Dr. T. M. L. Chrystie.

ly upon the knife and mechanical apparatus, and undoubtedly these are capable of producing successful results in some instances; although the uncertainty of effecting a radical cure in a long-standing case is recognized by all the authorities. In a case like that before us there is need for something more. The deformity which has existed for so many years does not arise alone from contractions of the superficial muscles, which the knife can reach; the deep cervical muscles are involved, and there are organic changes to be overcome. The overstretched muscles have grown weak and attenuated; the contracted muscles have undergone a structural shortening. The cervical fasciæ have participated in these changes, and sometimes the cervical vertebræ are seriously altered in shape by a continuous lateral pressure, and compensating curves are found in the spinal column below. Hence it does not always suffice to rely solely upon measures which act mechanically to release one binding tissue and to keep its divided ends apart. We must employ means to modify the nutrition of all the tissues, and these we find in active and passive movements and electricity.

Within thirty-six hours of the time of operation the patient was subjected to gentle passive stretchings of the neck on the right side, for the purpose of assisting the surgical measure by stretching the deeper tissues. On the third day active movements of the head were added to the stretchings, which had been increased in force, after the following manner: The patient was seated in a chair, with the shoulders strapped firmly back, so that they could not yield with the motions of the head. The operator stood behind, grasping the head on either side with the palms of his hands, and at his direction the patient executed the various movements of rotation, flexion to the right and left, forward and backward, etc. These sittings were of about ten minutes' duration twice a day, and as the muscles recovered their tone, the vigor of the exercises was increased, until finally they were performed against strong resistance by the operator. At the beginning of the second week local faradization was added to the foregoing means, and continued during the remainder of the treatment. The applications were not made solely upon the anterior portion of the trapezius and the sterno-cleido-mastoid muscles of the left side, as some of the authorities recommend. These were specially electrified, but all the muscles of the neck, shoulders, and upper portion of the back were subjected to the current, and it answered admirably in assisting to promote their development. The galvanic current was not employed, although in other cases I have seen excellent results from it in relaxing spasm and improving muscular nutrition.

There is still another use for active exercises, which is of the utmost importance in these cases of long-standing torticollis—namely, to educate the motor apparatus to respond quickly to motor impulses, and thus to break up the influences of habit. Long after a divided muscle has healed, and the subsequent treatment has brought about a relaxation of contracted tissues, a proper flexibility of action and a well co-ordinated muscular movement in response to special volitional effort, it will be found that the *habit* of holding the head on one side, and of turning the body instead of performing rotation of the head upon the axis, is still automatically maintained when the attention of the patient is diverted during the execution of natural movements. As a final method of treatment, therefore, the patient should be practised in making all the motions of the head and neck with rapidity, two or three times a day, until he acquires a complete automatic control of them. Our patient was instructed to continue the performance of such manœuvres after he passed from immediate observation; and an examination during the past week has shown that to his faithful observance of the directions he owes the high degree of perfection in function to which his cervical muscles have now attained.

October 21, 1873.

ON THE DIAGNOSIS OF SEX OF THE FŒTUS IN UTERO.

By WILLIS E. FORD, M.D.,
HOUSE-PHYSICIAN, CHARITY HOSPITAL, NEW YORK.

The diagnosis of the sex of the fœtus in utero has long been a subject of inquiry and investigation among scientific men. To be able to decide definitely regarding the sex of the child still unborn is certainly desirable to the medical practitioner, and would frequently be of great utility in cases involving legal questions relating to inheritance, titles, etc. Those who have investigated the subject have suggested several methods of arriving at a definite diagnosis, such as the external appearance of the abdomen during the last month of gestation; the actual length of the period of gestation; the sensations of the mother regarding the amount of movement or life in the fœtus; and lastly, the auscultation of the fœtal heart.

The former methods have been found of no practical use by the profession, and are only considered of value by midwives and the laity.

Such rapid advances have been made in the art of physical diagnosis, from the more thorough appreciation of facts elicited by auscultation, that it has been believed by some that this would also indicate the sex of the child before birth. A few papers have appeared based upon observation of cases, and tending to prove the truth of the assertion, that the sex and presentation of the child can be determined in the last month of pregnancy, by the rapidity and position of the pulsations of the fœtal heart. In the *New York Medical Journal* for July, 1872, seven cases, examined during the ninth month, were cited, and the following conclusions were drawn. Fœtal pulsations heard below a line drawn transversely to the body and dividing the uterus into halves, denote vertex presentations; above this, breech presentations. When the pulsations are 144 per minute it is a female; 124 per minute, a male. Variations of six beats from these numbers will not endanger a diagnosis.

While we recognize the value of such rules to the practitioner, we cannot consider them established by the small number of cases reported. Thinking further investigation might be of interest, we examined eighty cases from the wards of Charity Hospital, with results briefly as follows:—

All our observations were made and the results recorded during the ninth month of pregnancy; twin births, premature deliveries, and cases not fully recorded, being carefully excluded.

Of the whole number, there were 62 single births at term accurately recorded.

The average number of pulsations per minute of 24 cases of female children was 143; the highest noted was 160, the lowest 120. The average number per minute of 38 cases of males was 142½; the highest was 170, the lowest 110.

The fœtal heart was heard beating on the right side of the mother in 34 cases, on the left side in 25 cases. The heart-sounds were heard at the umbilicus of the mother in 4 cases above the middle of the uterus, in 6 cases; below, in 56 cases.

The presentations were as follows: Left occipito-anterior, 56; right occipito-posterior, 3; breech, 3. Of the cases of breech presentation, one was heard at the umbilicus, the other two below the middle of the uterus. Of those of the second position, one was heard at the umbilicus and two in the left iliac fossa. The conclusions we must necessarily arrive at, from a consideration of the above cases, are:—

That no indication of the sex of the child can be obtained from the pulsations of the fœtal heart.

Also that the position of the fœtal heart during the last month of utero-gestation is no guide to the presentation.

It was frequently observed during these investigations that the point of maximum intensity of sound changed from one examination to another; and that the nearer the approach to the time of delivery, the greater was the proportion of cases in which it was heard in the left iliac fossa.

In many cases during the first stage of labor the fœtal heart was heard on the left side of the mother, which for weeks previously had been heard on the opposite side.

In the course of these observations, special inquiries were made concerning the relative ages and vigor of the parents. From these elements we found that the sex of the child could be foretold with more certainty than by any other method with which we are acquainted. In the vast majority of cases the sex of the child followed that of the older and more robust parent.

This, however, did not occur with enough uniformity to establish any positive rule.

NOTES ON THE TREATMENT OF PUERPERAL CONVULSIONS.

THERE is no complication which can occur in the lying-in chamber more alarming to the attendants than the occurrence of puerperal convulsions. The wildest emotions are exceedingly apt to be manifested, and it is towards the medical attendant that all eyes are turned for assistance, for it is upon his knowledge and the ability to put it into practice that the life of the woman depends. The general features of treatment as practised by some of the obstetricians of New York are given below, and will not be uninteresting, we trust, to any reader who may be liable to be called to attend such cases.

The plan of treatment adopted by

PROF. T. GAILLARD THOMAS, OF NEW YORK,

is essentially embraced in the following: When a toxæmic condition of the blood is recognized in the pregnant woman from the presence of albumen in the urine, keep the mucous tract of the alimentary canal very active, prevent the woman from eating a large amount of animal food, and guard the skin against atmospherical changes in temperature. The *first* indication may be met by the use of saline cathartics, such as bitartrate of potassa and Rochelle salts. The *second* indication is met by keeping the woman as much as possible upon a vegetable and farinaceous diet, giving but a small amount of animal food; and the *third* indication is met by stimulating the skin once in twenty-four hours by hot-water or hot-air baths, followed by frictions with a rough towel, used by an *assistant*, until the skin is in a perfect glow, and causing the woman to wear flannel. Perhaps by these means further interference will be entirely avoided. In the worst forms of uræmic toxæmia premature delivery will be required, and it should be accomplished at the end of the eighth month, unless the life of the mother is seriously jeopardized previous to this time. The child will almost surely die if left to the end of the ninth month, and the life of the mother is greatly risked by the same postponement.

Suppose the woman is at the end of the ninth month, or before, and has a convulsion. The indication is to stop the convulsions and not permit them to return. Get the kidneys to work as soon as possible, and deliver the woman as soon as can be done with safety to the mother and child.

If the condition of the woman is such as to warrant it, draw blood. This is done for purely mechanical reasons, viz., to diminish the tendency to rupture of cerebral vessels, and the production of apoplexy. But you have bled, and another convulsion comes; place the woman under the influence of chloroform. Venesection and chloroform are the two means for stopping this kind of convulsions. Now bring on labor, and remove the child as soon as you can do so safely; but you are not obliged to deliver immediately.

The patient being under the influence of chloroform, if the os is closed, the warm douche may be used, throwing a stream of warm water against the cervix for twenty or thirty minutes at a time, to favor the softening and dilatation. The process of dilatation may mostly be left to nature, and within six or eight hours the os may be found to be dilated to the extent of an inch and a half or two inches in diameter.

If the pains are of moderate severity, the case may be left to nature chiefly until dilatation has taken place sufficient to admit of the use of the forceps or a resort to version, and either of these operations will be performed according to the circumstances of the case. There is generally no hurry about the delivering, for the woman is under the influence of chloroform.

The pressure now being removed from the kidneys, keep the bowels as loose as you can without prostrating the patients; sustain the strength by nutritious material, give stimulants if the pulse begins to flag, and keep the patient perfectly quiet.

The essential features of the plan of treatment adopted by

PROF. EDMUND R. PEASLEE, OF NEW YORK,

are as follows: The management of the puerperal condition can generally be so conducted as to prevent the occurrence of convulsions. If, upon examination of the urine, albumen is found present in quantities sufficient to give any apprehensions with regard to its toxæmic effect upon the blood, the first indication is to make the kidneys act. This may be done by the application of dry cups over the region of the kidneys; sometimes a plaster of some kind is sufficient; and very generally acetate of potash will produce sufficient diuresis if other measures fail. If there is an œdematous condition of the extremities, a pretty sharp drastic purgative may be given, and repeated consistent with the effect and general strength of the patient. By the use of these means no further trouble, generally, need be apprehended. If the case is sufficiently serious to demand the induction of premature labor, it should be performed as soon as the woman shows any symptoms of convulsions. If it becomes necessary to bring on premature labor, which is rarely the case if the woman is properly managed, it may be done by the use of the warm-water douche, sponge-tents, and Barnes's dilators.

But we will suppose that the woman suddenly, in the progress of her pregnancy, has a convulsion. The first thing to be done is to place the woman under the

influence of chloroform, for the purpose of preventing the further occurrence of convulsions. She may be held under its influence for almost any length of time if it is nicely and carefully administered, and not carried to the extent of producing stertorous breathing.

If the veins about the face are full and turgid, it may be well to take a pint of blood by venesection, but I have not found it necessary to resort to this measure during the last fifteen years. It is done with the view of saving the brain,—relieving the pressure upon the great nervous centres.

Next, in every possible way hurry up the labor.

If the os is closed, the warm douche, sponge-tents, and Barnes's dilators may be used; but the great objection to their use is, that too much time is consumed in effecting an entrance into the uterus. A more expeditious method of effecting an entrance into the cavity of the uterus than either sponge-tents or the dilators, is mechanical dilatation by means of the hand. Introduce the whole hand into the vagina, press firmly and steadily with the tips of the fingers against the os, insinuate first one finger into the os and cervix, then another and another, until the entire hand can be introduced and complete dilatation accomplished. The dilatation being accomplished, sufficient delay may be made to determine what the labor-pain will accomplish. If the chloroform prevents the convulsions, sufficient delay may be made to permit the head to come down, so that it can be readily delivered with the forceps; but if, after dilatation, there is necessity for immediate delivery, or there is any doubt with regard to the efficiency of the labor-pains while the hand is in the uterus, deliver by version—for there are even chances that the child will perish in either case, and the life of the mother is first to be regarded. After the child is born, chloroform is usually sufficient to prevent the occurrence of convulsions; but it may be assisted by the hypodermic injection of from five to ten drops of Magendie's solution. I would not advise the administration of more than one injection, and this may be used at any time before or after delivery, if the chloroform and venesection do not arrest their occurrence. The same remarks are applicable in case of a rigid os, in case of a labor at any part of the process in which the dilatation is not complete. The dilatation with the hand is much more expeditious than dilatation by any other means. The first principle in the management of a case of puerperal convulsions is to look for the safety of the mother. Get rid of the child as soon as possible, save it if possible, but at the same time do not risk the life of the mother.

PROF. A. L. LOOMIS, M.D., OF NEW YORK.

At a stated meeting of the New York Academy of Medicine, held April 3, 1873, Prof. Alfred L. Loomis read a paper upon the treatment of acute uræmia. Reference was made in the course of the paper to the subject of puerperal eclampsia. The plan of treatment which was particularly recommended in the management of cases of acute uræmia, was to produce diuresis by the use of an infusion of digitalis; and if convulsions appeared, to control them by the use of morphine administered hypodermically.

The Professor stated that he had treated one case of puerperal convulsions after this plan, and the result was entirely satisfactory. Reference also was made to cases treated by the use of morphia administered hypodermically.

In the discussion upon the paper of Prof. Loomis, the following remarks were made upon the treatment of puerperal convulsions:—

DR. ANDERSON, ex-President of the Academy, remarked that he believed "vent must be given somewhere." In one case which he treated by the use of ether inhalations, with only partial success in controlling the convulsions, he gave the patient grs. xx. of calomel, and followed it soon after with an injection of turpentine and soapsuds, and the result was an overflow of the bed, and a complete subsidence of the convulsions. The results in this case were sufficiently satisfactory to warrant him in the repetition of the treatment whenever the opportunity presented itself.

DR. BAXTER remarked that he was heartily sick of the use of chloroform, and that he relied upon infusion of digitalis in ℥ss. doses every two or three hours, and blood-letting.

PROF. WHITE, OF BUFFALO.

PROF. WHITE, of Buffalo Medical College, being present upon invitation, gave his views upon the subject of treatment of puerperal convulsions as follows: I am in favor of the use of opium, but I have never felt that it was important to give it hypodermically. My attention was particularly called to its use in a case where there was great œdema, immense distention of the abdomen, in which the anæsthetics pretty nearly controlled the convulsions, but it was deemed unwise to further continue their use. Opium was given in large doses by enema, with the most pleasing results. I believe that opium is beneficial from the fact that it relieves cerebral congestion. Since 1851, and more especially as I withheld the anæsthetics, have I been convinced that opium prevents cerebral congestion, hence has a tendency to prevent the return of the convulsions. But I can see no special advantage to be derived by giving it hypodermically. Again, I think it is important to unload. Calomel may be given perhaps, but I think that it is not as useful as some other remedy. Almost all cathartics are difficult of administration at this time. The cathartic which I prefer of all others is the croton oil. It is easily administered, is efficient, and safe if properly administered. Prepared with a little sugar and placed upon the root of the tongue, it is almost certain to operate quickly, fully, and freely. Another benefit which I think arises from the use of croton oil as a cathartic, is, that it irritates the mucous membrane of the entire intestinal canal, and in this way operates as a revulsive. This I regard as an important benefit. I formerly regarded the puerperal convulsion as something requiring blood-letting. I still think that there are cases of convulsions where the abstraction of blood is important. I would therefore still resort to blood letting occasionally, and the indications are plain which would demand the employment of this measure. The larger proportion of women, however, I believe will not require it.

CHARITY HOSPITAL.

In Charity Hospital, N. Y., Miss ——— remained during her pregnancy, and at no time had she presented any symptoms which would lead to the suspicion that she was to suffer from puerperal convulsions until the morning previous to the date of her confinement. Then she complained of not being able to see well. Her urine was examined, and found to be slightly albuminous. No œdema. Upon the next day, the day of confinement, her urine was loaded with albumen, and soon after her labor began she had a violent convulsion. The patient was immediately put under the influence of chloroform, and the warm douche used to soften the os. She was kept steadily under the influence of chloroform, and as soon as consistent a Barnes's dilator, smallest size, was introduced and allowed to remain. Within a couple of hours, by the continued use of dilators of different sizes, the os was quite well di-

lated. The membranes were then ruptured and a dose of ergot given, the pains already being moderately efficient. Within four hours from the time of having the first convulsion the woman was delivered of twins, of large size, and both living. The third stage of labor was completed promptly. After labor was completed the chloroform was discontinued, and soon after its discontinuance the woman had another violent convulsion. Chloroform was immediately readministered, and special measures at once adopted to secure a freer action from the kidneys, skin, and bowels than had been already employed.

This case fairly illustrates the plan of treatment adopted in that hospital in a case of puerperal convulsions. If, previous to the time for confinement, albumen is found in the urine, or œdema makes its appearance, active measures are taken to secure a freer action of the kidneys, those usually employed being diuretics and dry cups over the region of the kidneys. If œdema is present, the warm bath or hot-air bath are added, the patient well nourished with farinaceous diet mostly, the urine carefully examined, and slightest changes recorded. The remedies ordinarily employed, as being the most effectual in producing active diuresis, are the infusion of digitalis and the acetate, citrate, or bicarbonate of potash.

When a cathartic is employed, some active and reliable one is selected.

Reports of Hospitals.

ROOSEVELT HOSPITAL.

NOTES OF PRACTICE AND PECULIARITIES IN TREATMENT.

OXYGEN GAS IN PHTHISIS.

The administration of oxygen gas has just been commenced in a few cases of phthisis. Two cases which were receiving the oxygen were in the third stage of the disease, both having cavities in their lungs. So far as tried, the effects have been very pleasant, and exceedingly gratifying to the patients. The tonic effect realized has been very marked. The patients have slept better, and the appetite has been much improved. The amount administered was two gallons twice a day.

ACUTE AND SUBACUTE RHEUMATISM.

The leading feature in the treatment of these cases consists in the administration of iodide of potassium in doses varying from 8 to 15 grains, combined with 15 drops of the wine of colchicum-seeds three times a day. To relieve the local pain about the joints, the application of ice in ice-bags has proven most satisfactory. When the acute symptoms have been subdued, or have subsided, the application of kerosene oil to the stiffened joints, accompanied with free rubbing of the parts, has afforded more relief than other applications. Whether the virtue is in the oil, or in the rubbing, or in both, can hardly be stated, but the beneficial results which have been derived from its use warrant its adoption.

HEMI-CHOREA.

A case of this rather unusual form of the disease was noticed, affecting the right side, and was directly traceable to fright as its cause. A variety of treatment had been instituted in the management of the case, but it yielded only to the administration of carbonate of iron in free doses. The patient was a young girl, and although it may be questionable whether the subsidence of the disease was due to the remedy administered or to the natural progress of the disease, yet it is but fair to state that there was no amelioration in symptoms previous to the administration of the iron, and that improvement immediately followed.

GASTRO-ENTERITIS.

Some cases of this character, which were characterized by loose passages from the bowels from two to four in number daily, and more or less of gastric disturbance, have, after resisting other remedial measures employed, rapidly improved by use of a pill composed of nitrate of silver $\frac{1}{4}$ of a grain, and sulphate of morphia $\frac{1}{8}$ of a grain, three times a day.

EPILEPSY.

A somewhat remarkable case of this disease was under treatment, in which the fits made their appearance within fifteen minutes after receiving a fall and striking upon the head. There were no other symptoms present in the case except those relating to epilepsy. The fits, upon admission of the patient, were exceedingly frequent; but under the administration of bromide of potassium in large doses, the number and severity of the attacks have very much diminished, and the patient is feeling very well.

EMPYEMA.

The practice of making a free opening through the chest-walls in these cases, drawing off the pus, and washing out the pleural cavity, has been adopted in some instances in this hospital. In one case 108 ounces of pus were removed in this manner, and in another 60 ounces. Of course their constitutional treatment was pre-eminently supporting. These patients at present are in good condition, and steadily improving. In the same ward were other patients who had empyema, and had been treated by removing the fluid in the usual manner, and with the same general constitutional treatment as was adopted in the first-mentioned cases; they were in good condition and steadily improving. The amount of fluid in the pleural cavity in these cases, however, was far less than in those in whom the free incisions were made; and the question with reference to the treatment is, Would those patients who had such an immense amount of pus in the pleural cavity have done equally as well if they had been treated after the ordinary method by simple puncture, as they have done by making a free opening into the chest, and having the cavity daily cleansed by some slightly stimulating and disinfecting fluid? Carbolized water, varying in strength from 5 to 15 per cent., according to the tenderness and susceptibilities of the patient, is the fluid ordinarily employed for the irrigation of these cavities.

DELIRIUM TREMENS.

The standard prescription for this condition is—

℞ Chloral hydrat..... grs. xxx.
Potass. bromid..... grs. lx.
M.

To be given at bedtime, and continued through the day in smaller doses if necessary. This is the treatment for a case of fully developed attack. Milder cases are treated by two drachms of the tincture of lupuline and a bottle of ale at bedtime, and in a majority of instances this is all that is required; for as soon as the patient has secured a few hours of sleep the crisis is passed, and he will then begin to take his beef tea and milk, and come up rapidly. A patient

present who was suffering from alcoholism, and when admitted was very tremulous, was receiving

℞. Potass. bromid..... grs. xxx.
Morphia sulp..... gr. ½.
M.
S. t. i. d.

ULCERS.

The dressing which gives the most satisfactory results for cleansing a foul, sloughy, ulcerated surface, preparatory to strapping, consists of a solution of chloride of lime, one-half ounce to a pint of water, and applied three times a day upon a cloth or pledget of lint.

GRANULAR LIDS.

A number of cases of this kind have been successfully treated by the use of liq. plumbi subacetatis after all other ordinary means had failed. In one case ectropion was present in a marked degree, and with this treatment had almost entirely disappeared. About two drops of the undiluted liquor are dropped into the eye once in three or four days. It is important that the remedy should not be applied too often, lest the irritation produced should be continued, and prevent the beneficial effects which may follow if used at somewhat lengthy intervals.

Give the lids an opportunity to get better after each application.

CHANCROIDS.

First, a free cauterization with nitrate of silver or nitric acid, and after the separation of the slough dress the ulcer with iodoform. The results attending this method of treatment are uniformly good.

ABSCESSES.

The popular method of removing pus from the cavity of an abscess is by means of the aspirator. As a means of diagnosis, or a means for the simple removal of the fluid from a cavity, it is one of the most successful and convenient. As a curative measure it is not regarded so favorably. The simple removal of the fluid in many cases is not sufficient to prevent its return, and it becomes necessary to lay the walls open by free incision; secure a drainage by seton, and cause the cavity to heal from the bottom.

SPERMATORRHŒA.

℞. Ferri sulph.,
Acid. nitric. āā..... ʒ i.
Aquæ..... ʒ i.
Quiniæ sulph..... ʒ ss.
Acid. arsenic. et
Strychnia sulph. āā ..... gr i.
M.
S. Gtts. x., t. i. d.

The above prescription is regarded as more than ordinarily efficacious.

APPARATUS FOR MAKING EXTENSION AND COUNTER-EXTENSION DURING THE APPLICATION OF A PLASTER SPLINT TO FRACTURED THIGH.

Dr. Lagarde, House-Surgeon, has devised an apparatus for this purpose which differs somewhat from those now in use at other hospitals. It is described as follows: First, two blocks of wood six inches square are nailed to the edge of a firm table, one foot apart. A leather band five inches wide and thirty inches in length is stretched from the surface of one block to that of the other, and firmly nailed. This band is for the support of the small of the back, the shoulders and head being supported by pillows behind. For the purpose of counter-extension, and giving support to the pelvis, two straps, one inch in width and four feet in length, are to be nailed to the table at the inner border of each block, with a free buckle near the attachment of each. The patient now lying upon the small of the back across the broad leathern band, the two narrow straps are brought over the perineal and inguinal regions and buckled on each side. Extension is made from the middle of a horizontal bar, which has been designated as Butt's footpiece, which should be placed on the same plane with the surface of the blocks. The shoulders should be somewhat depressed from this plane. This apparatus can be made portable by arranging a support for the back, something after the fashion of an ordinary camp-stool, arranged so that it can be fastened to a table with screws. The ordinary belting leather, which is strong and soft, is best adapted for this use. It will be noticed that this apparatus has no perineal iron bar and no sacral plate, found in other apparatus devised for the same purpose. The perineal bar, besides being in the way of the adjustment of the roller bandage, has been known, from its firm pressure upon that region, to cause extensive slough and injury to the urethra. The sacral plate, unless the patient is under the influence of an anæsthetic, oftentimes causes greater pain than the fracture itself. Patients can be swung upon this apparatus for half an hour without suffering the least pain. In private practice the apparatus can be extemporized in a very short time.

TEMPERATURE TABLE.

Dr. Lagarde has also adopted a modification in the use of the ordinary table which makes the reference to the pulse and respiration record much simpler than the ordinary method. It is simply that the pulse and respiration are recorded at the angle of the wave. A single glance at the table thus arranged brings the pulse, respiration, and temperature under the eye at once.

BELLEVUE HOSPITAL.

DELIRIUM TREMENS.

What this class of patients most need is food and rest. Generally, if rest can be secured, there will be no further trouble in the management of the patients, for they will return to taking food, and in a short time the immediate effects of their debauch have passed.

Rest is usually secured by the administration of either potass. bromid. in large doses, grs. xxx. every two hours perhaps, or chloral hydrat. grs. xx. every hour. It is necessary in using the latter remedy to be cautious with regard to the size of the first doses, until the strength of the preparation and the susceptibility of the patient is fully understood. Then it may, perhaps, be given in much larger doses than indicated. Occasionally even large doses will be of no avail.

A very common prescription employed is the following:

℞. Potass. bromid..... ʒ ijss.
Chloral hydrat..... ʒ iss.
Syr. aurantii,
Aquæ āā..... ʒ ij.
M.

S. Half fluid ounce, and repeated every hour if necessary to procure sleep.

Sometimes the nausea and vomiting are so persistent that the patient cannot retain either food or medicine. These are not unfrequently distressing cases. The common method of managing such cases consists in the employment of nutritious injections and free administration of ice. Death occurs in this disease in

different ways. Some patients, who apparently are doing very well, die suddenly of syncope. Some patients lapse into a comatose condition, exhibit brown, dry tongue, feeble pulse, and death ensues.

Some patients, especially in the winter season, contract pneumonia, and when this occurs it is a grave complication, but not necessarily fatal. One important item in the management of cases of delirium tremens consists in a daily examination of the chest; for the approach of pneumonia is not infrequently very insidious, and in general it requires the attention of the physician rather than reliance upon the complaints of the patient for its early recognition.

ITEM OF TREATMENT.

An old lady, 70 years of age, was seen with œdema of lower extremities, ascites, and effusion into both pleural cavities, probably due to renal disease. She was the subject, however, of emphysema and chronic bronchitis. Pulse 84, and feeble. Diuretics, diaphoretics, and hydragogue cathartics were not regarded with favor in such a case as this, notwithstanding the patient had prominent dropsical manifestations. Dyspeptic symptoms were a leading feature of her case, and in private practice the administration of a small amount of champagne could be adopted. Tonics and stimulants should form the leading measures adopted for the removal of the fluid accumulation, rather than others mentioned. If it shall become necessary to call the assistance of other measures, diaphoresis is to be first employed, for the reason that it is thought to give less strain upon the system than either active diuretics or hydragogue cathartics. In other words, treat the general condition of such patients first, and dropsical manifestations afterwards. In many cases the former will be all that will be required.

INJURY IN THE MASTOID REGION.

An exceedingly interesting case was seen in the person of a young man, æt. 23, single, and a clerk. He was admitted to the hospital, at 3 A.M. Oct. 24th, 1873, in a state of coma. Right side completely paralyzed; complete loss of motion and sensation. There was a discharge of bloody serum from right ear. Temperature not elevated. Pulse 60. No signs of external injury. Urine negative. 10½ A.M. Sensation returned. Hemiplegia only partial. Temperature not elevated. Breathing stertorous. Consciousness almost entirely suspended. 3.30 P.M. Consciousness improved. Catheterism.

Oct. 25th. Patient has passed a very comfortable night and has taken a little coffee and milk. Catheterism. Discharge from ear diminished.

Oct. 26th. Patient more conscious still. Answers some questions, and takes some food. Discharge from ear more profuse. Catheterism. Temperature very slightly elevated. Pulse about normal.

Oct. 28th. Paralysis entirely recovered from, and sensation returning. To-day a large ecchymosis has been discovered behind the right ear, immediately over the mastoid cells.

The treatment of this case has consisted in perfect rest in bed, head elevated, and application of cold and the administration of such nourishment as the patient could be induced to take, and attention to the natural wants of the body. An interesting question in this case is, How is the hemiplegia to be accounted for? The injury and the hemiplegia were both upon the right side.

Was it due to the effect of alcohol (for the patient was out on a debauch when he fell, and has no recollection of what struck him, if he was struck), or was it due to some lesion explained upon the ground of *contre-coup*? It was believed that the latter was the most consistent explanation of the symptoms. Again, had the *contre-coup* produced laceration of brain-tissue, or had it resulted in the wounding of one of the veins going to the longitudinal sinus, and permitted a slight effusion of blood, which, associated with the concussion, had given rise to the symptoms? There was no spasm or rigidity of the muscles. These are interesting points in diagnosis, and are not altogether unimportant, especially in connection with "picked-up" cases of intoxication. The prime features of the treatment are worthy of extensive patronage.

INTERMITTENT FEVER.

It is allowable for the patient, after admission, to have one chill, in order to determine the character of his disease; but subsequent to that the occurrence of chills is not permitted. The certain arrest of the disease is looked for under the influence of what are denominated Clark's powders, which are formulated as follows:—

℞. Quiniæ sulphat.....grs. x.
Pulv. capsicum.....grs. iij.
Pulv. opii.....gr. i.

The patient receives one powder twelve hours previous to the time for the occurrence of the chill, and another about an hour previous.

The powders are continued in this manner for three or four days, and then continued every morning as long as may be desired. An important consideration affecting the continuation of the remedy is the following: It not infrequently happens that the chills return after they have been stopped, and the most common time for them to return is at the end of two weeks. Near the expiration of two weeks, therefore, it is well to return to the full-sized powders, if they have been diminished in size, and continue them in full doses for three or four days, twice a day, as at the outset. In cases which have been of long standing, and proved themselves very intractable, when the chills have been once stopped the remedy should be continued over three or four periods of return at least. By this method of treatment cases of chills and fever can be cured which have resisted all former treatment.

After the breaking of the chill the administration of iron is about as useful as the administration of quinine before. If the second chill occurs after admission to the hospital, the question, Why? is asked at once, and search made for the answer.

ECZEMA CAPITIS.

Cure it if possible, notwithstanding the somewhat prevalent idea to the contrary. The method of procedure recommended is as follows:

First, apply a poultice every night until all the scabs are removed. The ulcerations, which are sometimes present after the scabs have been removed, are best cured by the application of a wash made of nitrate of silver grs. v. to the ℥i. of water. The following is then used with good success:

℞. Aquæ Cologn..... ℥iv.
Glycerine..... ij.
Carbolic acid crystals..... i.
Borax..... i.
M.

Continue the application of this remedy for some time for the purpose of curing the eczema.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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

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HOSPITAL APPOINTMENTS.

We believe that it is pretty generally understood that it is very difficult to get any hospital appointment in this city. The colleges have had the reputation of controlling positions on the medical staffs, and we believe they have fairly and honestly earned it. Every medical man appreciates the necessity of clinical teaching in connection with didactic instruction, and on general principles no objection can be made against medical professors holding hospital appointments, and making use of them for the benefit of their pupils. There are many reasons why these gentlemen should enjoy these special facilities, reasons which would not hold good with men whose object is not to let their light shine. The objection has always been, however, that there has been a little too much of the grasping principle among these teachers to impress the professional public with their disinterestedness in anything save the cause of clinical teaching *per se*.

We have taken some little pains to collect some statistics concerning hospital appointments in this city, which it will not be uninteresting to analyze, in the hope of explaining some of the reasons why. There are eighty-one gentlemen, physicians and surgeons, who hold good appointments in our different hospitals. In this number we only include such as are in active duty, such as are supposed to visit the wards as attending physicians or surgeons, the consulting staffs being omitted. Of these eighty-one gentlemen forty-three are professors or instructors in our medical schools, and are very evenly distributed throughout the different charities. In fact it would seem to prove that the schools had compromised the matter so thoroughly that no special advantages would be taken one over the other, the aim of each being to keep its quota in hospital position at all hazards, and irrespective of outside influences. Eighteen gentlemen of the eighty-one hold two hospital appointments each, and all of these, save three, are teachers in our medical schools. This certainly speaks well for the appreciation of facilities for clinical study on the part of our medical professors. We are happy to say that we can find but two gentlemen who occupy three positions each. In this estimation of the number of positions we leave out altogether those of the New York Hospital, the said institution having departed from the sphere of its former usefulness four years ago. If we had taken these appointments into account we should have had more double ones to add to the list. As it is, the only evidence of the existence of any staff at all for this defunct institution, is the yearly publication of the names of its members in the *Medical Register*.

It is always more or less interesting, in alluding to enviable positions occupied by our fellows, to speculate upon the chances which have secured them. Those who have been defeated in a struggle for any position always find consolation in the thought that merit is not always successful, that favoritism and influence are the best explanations of good fortune. Let us see how their rule will work in reference to our hospital appointments. In the first place, there are forty-three appointments confined to the schools. It is but just to say that many of these are due to merit, but special school influence has so much to do with obtaining them that individual merit is completely overshadowed by expediency. Then again we know that school positions go a great deal by influence and favor, and of themselves are no real criterion of individual worth or individual fitness for such positions. Although this rule has many exceptions, where merit is the controlling element from beginning to end, still it is, nevertheless, a general one, admitting of the general interpretation that the fact of being a member of a faculty is of primary consideration.

To prove this we will give our readers an instance. When the staff of a recently organized hospital was made up by a college faculty, several worthy applicants were informed that they could not hope to be successful, for the simple reason that they did not belong to the said school, or were not avowedly pledged to its interests. This certainly does not look as if absolute merit was the controlling element of such appointments.

In regard to the matter of influence, unconnected with schools, we find that forty appointments have been secured. Of this number there are only fourteen gentlemen concerning whom it can be said that pure professional merit was the only explanation of their appointment. We are ready to prove this statement on the ground of a pretty thorough acquaintance with the circumstances attending the appointment of all the gentlemen holding hospital positions, and of the professional work which each and all have done to merit them.

And, after all, it is a matter for congratulation that in the great struggle for these appointments a few can obtain them irrespective of any school or political influence, and by sheer and simple fitness for the position. The purely meritorious man has some hope when he applies, provided the vacancies sought be not desired by some one of the medical schools. There are at least three hundred medical men in this city who are thoroughly capable of occupying these positions, and of these we can safely say that one-third are anxious to secure them. The applications compared with the places to be filled are two to one, and yet we find that there are eighteen gentlemen who occupy two places each, and two who occupy three. Their excuse for so doing cannot certainly be that none can be found to divide responsibilities with them. If there be any doubt in their minds on this score, they have but to vacate one of their positions and clear their consciences.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

THE meeting of the American Public Health Association, which was held in this city on Nov. 11, 12, 13, was a singular and gratifying success. The papers read were, without exception, models of their sort, and were written by practical hygienists for the purpose of gaining the public ear upon the great questions which lie at the very foundation of healthful existence. The subjects were exceedingly well chosen, and there was a harmony and dignity in the discussions which not only reflected credit upon the distinguished gentlemen who took part in them, but afforded an example of what a few earnest professional men can accomplish who assemble for the purpose of seeking and developing scientific truth. We were pleased to see many of the papers which were of special interest to the public, which appealed to their understanding, so fully reported in the daily papers. We believe in educating the people, and this Association can do a great deal in this direction. Many of the subjects presented were also of great importance to the profession, in way of suggesting the proper channels for the exercise of influence individually and collectively, towards perfecting and generalizing systems of sanitary reform and hygienic regulations. We propose to remark upon some of these topics at length at some future period.

THE BOGUS DIPLOMA TRAFFIC.

THE bogus diploma institution in Philadelphia is likely to have a chance to vindicate what the faculty please to call their "fair fame." Mayor Stokely of that city has been informed that the State Supreme Court has issued a writ of *quo warranto* against the said institution, returnable at the next session of the court in that city. Of course the President, Dean, and others of the "university" are anxious for an investigation, but we imagine that they are not quite so clamorous for the justice that may follow. The law, however, gives the greatest swindlers a chance for escape.

ACCIDENTAL POISONING.

EVERY little while we hear of a death from accidental poisoning, and are impressed with the necessity of guarding against similar mishaps in future. Not long ago we reported the case of the death of a physician from carbolic acid, taken by mistake for whiskey; and quite recently another physician in Dutchess Co., N. Y., has died from a dose of aconite, under very similar circumstances. In both instances the bottles containing the poison were very like those containing the articles for which the said poison was mistaken. This, in fact, appears to be the explanation for most of these accidents, and is the easiest method to insure them. The remedy suggests itself to any one who will give the matter a moment's thought, and that is, to have the bottles for poison so peculiarly constructed as to render mistake impossible, even in the darkest night. There is a particular kind of bottle made by one of the glass companies of this city which answers every such purpose. The glass is blown in such a way as that the outside of the bottle is raised at short distances in diamonds, which can be felt the moment the vessel is grasped. In our opinion, this kind of glassware should be in universal use for containing poisons, as affording the surest prevention for the most melancholy of accidents.

Another cause for accidental poisoning is the want of proper labels upon bottles containing medicine; and when we consider how careless physicians who carry their own medicines generally are, the wonder is that mistakes do not more frequently occur. The rule should be with physicians and every one else, never to use any bottle without a label, in fact not have any such in their possession.

PRIVATE MEDICAL CLASSES.

THE so-called "quiz class" system connected with our medical colleges is growing more and more in favor. This is as it should be; supplementing as it does in so effective a manner the regular course of lectures. We believe that the time is not far distant when the professors themselves shall see the necessity of incorporating the plan in the curriculum.

Reviews and Notices of Books.

THE DISEASES OF THE PROSTATE, THEIR PATHOLOGY AND TREATMENT; COMPRISING THE JACKSONIAN PRIZE ESSAY FOR THE YEAR 1860. By Sir HENRY THOMPSON, F.R.C.S., etc. Fourth Edition. 8vo, pp. 355. Philadelphia: Henry C. Lea. 1873.

IN its present fourth edition, the above well-known work still maintains its reputation as the standard monograph on diseases of the prostate. The few changes and additions made from the third edition are mainly of a practical character; and, as stated in the preface, "the existing material has been compressed so

much as somewhat to reduce the size of the volume, and at the same time to increase its utility. The following is a short summary of the most important parts of the work :—

The first and second chapters are devoted to the elaborate consideration of the topographical and structural anatomy of the prostate; size, weight, position, measurements, "with facts relating to the morbid condition of the organ," embodied in a tabular review of 194 dissections; its lobes, in regard to which, to the author belongs the credit of having first prominently dispelled the idea of the "median portion" being an isolated or third lobe; the analogy of the prostate to the uterus, and its minute anatomy.

The third chapter treats of the acute and chronic inflammation of the organ. In the treatment of acute prostatitis, besides general antiphlogistic regimen, the author favors the application of leeches to the anus and the use of the warm hip-bath. The patient should be allowed to remain in the latter, at a temperature of 100–5°, for a period not exceeding six or eight minutes, not in order to induce a flow of blood to the pelvic viscera, but to expand and fill the vessels of the skin by a smart impression upon it, thus producing a temporary congestion of the surface, with the result of relieving the deeper parts. In case of suppuration, the discharge of the abscess, either spontaneously or by operation, *per rectum*, is less favorable in its results than by an incision in the perineum made at as early a period as fluctuation is detected; when the swelling is so considerable as to cause retention of urine, the necessary passing of a catheter will often cause the discharge of pus. The author recognizes three causes of chronic prostatitis: 1st, Morbid persistence of unhealthy action after an acute attack; 2d, a long and tedious resolution; 3d, the condition may commence in the chronic form, being either primary or dependent on disease of some neighboring organ. Here, as also in the chapter on hypertrophy, the author cautions against the frequent diagnostic error of confounding the enlargement of chronic prostatitis with hypertrophy. In the treatment of chronic prostatitis, the author now always employs counter-irritation at the surface of the perineum by the acetum cantharidis, at the same time improving the general condition of the patient by the use of iron, quinine, and nux vomica. When chronic inflammation of the organ gives rise to nocturnal emissions, the contact of a foreign body ordinarily increases the existing irritation, and the application of nitrate of silver in solution, grs. v.–x. ad ℥, is preferable.

The subjects of hypertrophy of the prostate and tumors are discussed in the fifth and six chapters. The former is divided into four varieties: 1st, Simple increased development of all the component tissues of the organ in about equal ratio; 2d, excess of development of the stromal over the glandular portion; 3d, excess of development in the glandular over the stromal portion; 4th, rearrangement of the structures, stromal and glandular, in the form of tumors. In considering the etiology of enlarged prostate, a distinction must be made between the enlargement occurring in young and in old men. "In youth the organ becomes enlarged by interstitial plastic effusion, the result of inflammatory action. In old age, there is an unnatural development of the prostatic tissue itself. A prostate, therefore, which has been enlarged by inflammatory effusion, is probably less likely subsequently to exhibit an hypertrophic tendency; nutrition is impeded, not encouraged." Hypertrophy is attributed to necessity of structure, all other causes which have been assigned being untenable. "The prostate, finding its analogue in the uterus, is, like this, prone to the formation of tumors in its substance." In regard to the frequency of enlarged prostate, the author regards it rather as an exceptional change than as an invariable occurrence, "it being highly probable that a slight tendency thereto, almost if not quite unrecognizable during life, may occur in about one out of three individuals after sixty years, and that a marked enlargement may not be met with in one out of seven or eight at that age and upwards." The differentiation of retention, "*engorgement*," and overflow are dwelt upon at considerable length in Chapter IX. In regard to treatment directed to the enlargement of the organ itself, all operative and mechanical interference, hitherto employed, is condemned, as the slight temporary benefit attained does not compensate for the consequent irritation. The treatment must be palliative, directed to allaying the derangements of the bladder, such as chronic cystitis, atony, irritability, incontinence, and hemorrhage; directions for the relief of these are very fully given, and the author concludes, "no therapeutical agent is known which has the power of reducing an actual *hypertrophy* of the prostate." After reviewing the different plans for overcoming the obstructing bar at the neck of the bladder, the author does not think himself justified in recommending any of them, believing that the condition of patients so afflicted can be much ameliorated by proper care and management.

The chapters on cancer, tubercular disease, and atrophy are as fully considered as the comparative rarity of these diseases admits. The concluding chapters of the work, on prostatic concretions and the relations between hypertrophied prostate and stone in the bladder, are modified in accordance with the author's latest views in his work on "Lithotomy and Lithotrity." The book is handsomely illustrated by twelve lithographs of the normal and morbid anatomy of the organ, and several woodcuts.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, Nov. 6, 1873.

DR. AUSTIN FLINT, PRESIDENT, in the Chair.

INTRA-RECTO-ABDOMINAL EXPLORATION.

THE first paper for the evening was read by Dr. Charles A. Leale, entitled "Intra-recto-abdominal Manual Exploration."

The speaker first called attention to the important assistance which this means of examination may give in diagnosticating various conditions of the viscera found in the lower portion of the abdominal cavity, such as are immediately connected with the bladder, uterus, ovaries, and even as high up as the kidneys, stomach and liver, and spleen. The method of procedure was described as follows: The patient upon whom the operation was performed, was already perfectly relaxed, having swallowed a poisonous dose of chloroform. The hand and arm were well smeared with some lubricating substance, the hand, closely folded into a cone shape, was carefully passed through the sphincter ani, and then a moment's pause was made; the hand was carried on until it reached the sigmoid flexure of the colon, when it was partially turned upon itself, permitting the back of the hand to look towards the concavity of the flexure, and then permitted to

pass through the flexure, when another pause was made; from this point the hand was carried along the colon until it reached a point four inches above the umbilicus, then being sixteen inches from the anus, as measured upon the arm. While in this position the fingers could be distinctly felt through the abdominal walls, and were readily recognized by an assistant. As the hand was being withdrawn, an exploration was made of some of the pelvic organs, although this was not the object which gave rise to the introduction of the hand, as will be seen further along. The patient was a sufferer from dysmenorrhœa. The uterus was found displaced, and could be as easily grasped and examined as if being examined through an opening made in the walls of the abdomen. An interstitial fibroid was also recognized upon its surface. The ovaries were grasped and the bladder recognized. The hand was then withdrawn without being stained in the least by blood. The greatest dilatation of the anus was ten inches in circumference, corresponding to the size of the forearm.

The operation was performed substantially as described by Prof. Simon, of Heidelberg, to whom is due the great advance which this method of exploration has made within a few years past. A brief history of the case in which the operation was performed by Dr. Leale, and the reason for performing it, is as follows:—

Mrs. H., æt. 45, drank two ounces of pure chloroform for a suicidal purpose. As soon as the Dr. arrived, an emetic of salt and water was immediately administered, and which almost as immediately produced free emesis. No odor of chloroform was detected from the contents of the stomach. Strong odor of chloroform was recognized in the breath, showing that the chloroform had been entirely absorbed, and was being eliminated rapidly by the lungs. The stomach was washed out in addition to the emesis. The patient remaining insensible, and giving unmistakable evidences that death from asthenia was rapidly approaching, it was determined to pass the hand into the abdominal cavity, and irritate the solar plexus of nerves with the hope that respiration might be sufficiently aroused to carry the woman over the extreme point of danger. The result of the operation certainly justified its performance; for simultaneously with the irritation of the root of the diaphragmatic plexus of nerves the respiratory act became more vigorous, was soon followed by returning consciousness, and the patient was saved from a fatal narcotism.

Three days after the operation the woman was again at work, the sphincter retained the fæces in a normal manner, there was no gastritis, and recovery was made without an unpleasant symptom, save a sharp headache which lasted for a few days.

Irritation of the solar plexus of nerves in this case was suggested by the results obtained, in a case of like character, from the use of electricity over the region of the solar plexus for the purpose of increasing the force of the respiration. In that instance the patient was restored from impending death by the use of artificial respiration, and the application of electricity as referred to.

Dr. Benjamin Howard commented upon Dr. Leale's paper substantially as follows: I feel hardly able to share the enthusiasm expressed by the author of the paper respecting the employment of internal abdominal explorations in the diagnosis of pathological conditions within that cavity. I am of the opinion that there is a debit and credit side to the question.

From this point the doctor very pleasantly illustrated his ideas by drawings upon the blackboard.

In the first place, with regard to its value as a means of resuscitation. Although Dr. Leale has fortified his case by the results obtained, I am not sure but that the same results might have been obtained by striking sharply upon the epigastrium, where we can come into very close proximity with the solar plexus, and produce marked effects by blows. I am of the opinion that, although admissible, the use of both electricity and internal abdominal exploration, for the purpose of irritating the solar plexus of nerves as a means of resuscitation, should only be employed as a *dernier ressort*, and for the reason that less formidable and equally efficient means can be obtained by externally slapping the epigastric region.

The Doctor mentioned some precautions to be taken in the performance of the operation, to which the author of the paper did not make special reference. The use of an anæsthetic is always required to render the operation possible. The anus should be fully dilated, by making firm traction with the fingers inserted into it, and making traction in opposite directions. As soon as the promontory of the sacrum is reached, the hand should be gently turned, bringing the back of the hand uppermost, to facilitate its passage through the sigmoid flexure.

With regard to the value of this method as a means of diagnosis of stone in the bladder: When the bladder is full, a calculus lying in the *trigone vesicæ* may be raised upon the ends of the fingers, and it would seem as if it could be grasped in the hand, but that cannot be done. The space is so small, and so much tissue intervenes between the hand and the stone, that it is impossible to seize it. Some idea of the weight of the stone may be derived by this method, and that is all.

I am of the opinion that this method of examination promises to be an exceedingly valuable one in the diagnosis of tumors of the uterus, ovarian tumors, displacements of the uterus, etc. By this means much can be learned of the density and connections of tumors existing in the pelvic cavity. That which would most justify this method of examination, is the existence of a stricture, especially when it occurs at the sigmoid flexure of the colon. The stricture can be much more advantageously reached with the fingers than with a bougie, and some estimation can be made of its character and extent, which can scarcely be derived by any other means than the touch.

So much for the advantages attending its use. There is, however, a debit side of the question. In some cases, where the hand has been introduced with apparent success, and the amount of dilatation has been very moderate, a good deal of difficulty in controlling the fæces has followed. In those cases where it is most justifiable it may do the most harm, perhaps. There is great liability, in case of stricture of the intestine, of having ulcers just before or just beyond the stricture, and the violence necessary for the introduction of the hand into the bowel may be sufficient to convert the ulceration into a perforation, and with this comes collapse and death. Such cases have already been recorded in *The Lancet*, and should have an influence upon the employment of the method of examination. Too much should not be expected from its adoption, and it should be resorted to only in exceptional cases, and perhaps only as a *dernier ressort*.

Dr. Peaslee would place a check upon the indiscriminate use of this method of exploration. It can be employed with benefit in certain cases, in which abortion has habitually occurred in consequence of displacement of the uterus backward. If resorted to for this purpose it is probably well to wait until the

pregnancy has advanced to four months, and it should not be longer postponed for reasons which are evident. If practised earlier than this, the uterus will immediately fall back, and no benefit will be derived.

The use of this method in gynæcology is very important, and so long as the hand is kept within the pelvis, no harm can well be done; but as soon as the hand passes above, there is a liability to do injury which corresponds to the size of the hand and the size of the intestine.

In some cases the curves of the intestine are such that it is impossible to pass beyond them without lacerating the gut. Its chief use should be restricted to exploration in connection with diseases within the pelvis. The bowels should be thoroughly emptied before the operation; and when high exploration is resorted to, throwing a stream of warm water alongside of the arm, by means of a long-nozzled syringe, will materially facilitate its passage. The operation, in general, should be employed only in exceptional cases.

It is justifiable when a differential diagnosis is to be made between a fibroid cyst of the uterus and an ovarian tumor, or whether the tumor is an ovarian tumor or a tumor which comes from above, such as an enlarged kidney or liver. Still it should not be resorted to, only when other means have failed in arriving at a diagnosis. As a rule, the loss of power in controlling the passage of the fæces lasts only for a few days; yet this is one reason against an indiscriminate use of the method.

Dr. Leale was of the opinion that, with a very pendulous abdomen, such as his patient had, irritation of the solar plexus could not be as satisfactorily accomplished by external measures as by internal.

CHOLESTERÆMIA.

The second paper for the evening was read by Prof. Austin Flint, jr., upon the subject of "Cholesteræmia." The author of the paper gave an interesting and somewhat exhaustive *résumé* of the experiments which he had performed with the view of determining the nature, origin, and termination of cholesterine in the human body, the results of which experiments he brought prominently before the profession in the year 1862. Although the views presented by the author of the paper in 1862 have passed comparatively unnoticed in this country and England up to the present time, they have received some attention in France and Germany, and within a few years some experiments have been performed in Germany which have led the author to believe that his own experiments possessed some scientific importance. "It is well known," says the author of the paper, that "there are two classes of diseases widely differing in their gravity. In the first place there is the ordinary attack of jaundice, which is not very severe, not very dangerous, is relieved by some simple remedy, or relieves itself after a very few days. But there are other cases of jaundice, in which the icterus is not more intense, may be even less intense, than in these moderate cases, but which are characterized from the very beginning by very grave symptoms, referable to the nervous system, and almost invariably terminate in death.

In occasional cases of cirrhosis of the liver, there are manifested grave disturbances, referable to the nervous system, with more than an ordinarily severe sequence from the pathological lesion existing in the organ.

An effort has been made to explain the pathology of such striking cases by supposing that some of the constituents of the bile have been retained in the blood, which should have been eliminated; but physiological experiment has never verified the supposition. The reason why the biliary salts have not been found in the blood is because they are not secreted. "The distinction between secretion and excretion is almost absolute. The elements of secretion do not pre-exist in the blood, but are manufactured in the substance of glands out of materials furnished by the blood; that their flow, as a rule, is when there is necessity for their function; that when the function of the gland is interfered with the materials do not accumulate in the blood. The elements of excretion always pre-exist in the blood; they are never manufactured by special organs, but are the result of the general processes of disassimilation; they are not manufactured by glands, but separated from the blood by glands, and when the function of excreting organs is interfered with, an accumulation of the elements occurs in the blood and produces a toxæmic effect."

The Professor then gave a somewhat extended but interesting account of the experiments which he had performed to demonstrate that cholesterine is always found in the blood, is always found in the nervous tissue, and is always found in the bile.

It has been found by his experiments that the blood gains something over twenty-three per cent. of cholesterine while passing through the brain, and loses cholesterine in very near the same proportion while passing through the liver.

It has also been found that, in cases of hemiplegia of some standing, the blood taken from the affected side contained *no* cholesterine, while upon the unaffected side it was found as in normal blood. These experiments proved that cholesterine is formed in nervous tissue, is eliminated by the liver, and is therefore placed among the excrementitious substances, and its disappearance from the body is under the form of stercorine.

"If it be true," says the Professor, "that it is an excrementitious substance, we should expect that if the liver becomes disorganized, so that it cannot be eliminated, the term cholesteræmia would be justified in science."

The result of examination in a grave case of jaundice, accompanied by serious nervous disturbances, such as stupor, coma, and convulsions, showed extensive structural disease of the liver, and the quantity of cholesterine increased to three times the quantity found in the blood in a case of simple jaundice.

Over 50 per cent. above the average amount of cholesterine has been found in the blood of a patient who died of cirrhosis of the liver, attended by grave nervous disturbances. Finally, the views of the author of the paper are summed up in the following:—

"Cholesterine is an excrementitious substance, produced chiefly by disassimilation or physiological wear of brain and nervous tissue, is taken up by the blood and carried to a special organ for its elimination, and that organ is the liver. In the liver it is separated from the blood, and finds its way into the bile discharged into the small intestines, and there changed into stercorine, which is discharged from the body at about the rate of ten grains each twenty-four hours. In certain cases of disease of the liver, accompanied by grave nervous symptoms, there is an accumulation of the cholesterine in the blood, giving rise to the condition which has been called cholesteræmia."

The present paper was called out by the report of some experiments which have lately been performed by an eminent German professor in Leipsic, by injecting cholesterine into the circulation of animals. The results which have been produced will warrant the conclusion, apparently satisfactory at least, that

those symptoms which accompany severe jaundice, and are not unfrequently seen in connection with many diseases of the liver, are the manifestations produced by an abnormal accumulation of cholesterine in the blood, which conditions have been improperly recognized under names such as cholæmia and others.

Dr. Barker made the following remarks and suggestions upon the paper read by Prof. Flint: I wish to call attention to certain practical bearings the discovery possesses. There are certain conditions which every man is familiar with, and which are characterized by a well-known mental sluggishness and general torpor of the system, that yield at once to what is termed a free bilious evacuation from the bowels. Bilious attacks, bilious headaches, etc., are the terms commonly applied to such conditions. Now it seems to me the paper upon cholesteræmia proved that, through the medium of the liver, there is eliminated from the system an effete *débris* of nerve-tissue, and that the failure in elimination of this material gives rise to those phenomena called "biliousness;" and by the action of proper remedies the effects of this retained element are caused to pass away. One of my patients, an eminent lawyer, was in the habit, for many years, when he was called upon to make a strong mental effort, of taking ten grains of blue-pill, and following it with a bottle of congress water, a few hours before entering upon his labor.

Physiologists have been long accustomed to recognize a certain form of disease, called cholæmia, by the presence of bile in the blood. The culmination of the disease consists in three classes of phenomena: first, those which are referred to the nervous system, such as delirium, convulsions, and sometimes coma; second, those which are referable to the nutritive system, resulting in typhoid symptoms; and, third, a class of phenomena referable especially to the circulatory system, the mucous membranes, and the kidneys, resulting in hemorrhages from the mucous membranes, etc., etc. There are also cases of so-called melæna, which are attended with great disturbance of the nervous system; and the thought has been brought to my mind many times, may not some of the phenomena which have heretofore been classed under the head of bile-poisoning be due to the presence of cholesterine in the blood?

In my own special department I have seen a few cases in which the symptomatic phenomena finally culminated in convulsions, dependent upon the condition of the liver, as I believed, and not upon the condition of the kidneys.

From my experience in connection with some of these cases I am convinced that there is a certain class of cases which are dependent upon cholesteræmia rather than upon uræmia, in which convulsions were developed; and in accordance with that belief I have directed my treatment towards the liver, and have witnessed the most gratifying results.

I simply throw out these hints, which are of a practical nature, and may be of service in the consideration of the paper to which we have listened.

[The practical application of the theory set forth in the paper is to be made the subject for discussion at some future meeting of the Academy.]

Prof. Denning, of Columbus, O., was introduced to the Academy, and stated that in the year 1842 he introduced his hand into the rectum of a man 48 years of age, in search of a supposed stricture. No unpleasant effects followed the operation, and the man was able to retain the contents of the bowel without difficulty.

JOURNAL AND LIBRARY ASSOCIATION.

Regular Meeting, Nov. 7th, 1873.

Dr. Peters, President, in the Chair.

THE USE OF WARM WATER IN SURGERY.

The paper for the evening was read by Dr. Frank H. Hamilton, on "The Use of Warm Water in Surgery." It consisted principally in the recital of cases which have been treated with warm-water dressings in the service of Dr. Hamilton, at the various hospitals with which he is connected either as visiting or consulting surgeon.

The use of warm water as a surgical dressing is nothing new; but from time to time, as it has become popular, it has lost its popularity and fallen into disuse. But the Dr.'s late experience has led him to the belief that better results can be obtained by the use of warm water as a surgical dressing than by the use of cold water.

Formerly irrigation was regarded as the most useful method, and the use of water at about a temperature of 60°; but the results obtained in the cases lately under observation has taught that submersion is better than irrigation, and that the temperature most desirable to be secured is from 90° to 98° F.

The number of cases whose histories were given was ten, and embraced a great variety of injuries and diseases which demand surgical interference. The results obtained by the use of the warm-water dressing in these cases was uniformly good, and it was the uniform good results which gave rise to the belief that it constituted one of the most valuable surgical dressings within our reach. There was no distinct inflammatory reaction in any case. The most reliable effects appear to have been obtained by employing submersion at a temperature of about 90° F.

In some cases it was impossible, either from the condition of the patient or from surrounding circumstances, to employ submersion. In such cases water fomentations were employed by means of compresses covered with cotton and oil-silk, and these are only second in value to the submersions. Both are regarded as being superior to irrigation. In most cases where submersion was employed the limb became considerably œdematous, and in some cases extremely so. This would excite alarm perhaps in the mind of one not accustomed to see such developments; but in no case has any injurious results attended its occurrence. Fomentations do not dispose the limb so much to œdema. When irrigation is employed there is no tendency to œdema, but inflammatory reactions are very liable to occur and continue.

In no case where the bath or fomentations were employed did erysipelatous inflammation occur, nor has gangrene extended beyond the parts actually destroyed by the accident, nor pyæmia, nor septicæmia, nor the accumulation of pus or the formation of sinuses taken place except in one case. In one case gangrene had set in, but was speedily arrested by raising the temperature of the water to somewhat above 90°, it having been permitted, through carelessness, to fall considerably below that point.

The first three cases were cases of excision of the great-toe joint, in which the wounds left by the operation were large.—Bath 14 days.

The fourth case was one of resection of the elbow-joint. The joint was exposed and all the tissues found filled and dripping with pus. The limb at the time of operation was enormously swollen.—Bath 14 days, and fomentations subsequently.

The fifth case was a contused wound of leg. The

limb was almost completely smashed. Fomentations chiefly for 30 days. The ankle-joint was exposed.

The sixth case was a lacerated and contused wound of the foot. The bones were considerably broken, and the bottom of the foot extensively lacerated. This was the case in which gangrene made its appearance, but was arrested by raising the temperature of the bath.—Bath 16 days, and subsequently fomentations.

The seventh case was one of necrosis of humerus. Fomentations were employed. The case is doing well.

The eighth case was one of lacerated wound and fracture of leg. The laceration of soft parts was extensive. This patient was treated for three or four days by the application of oakum and a roller bandage. When first seen at the hospital his condition was such as to forbid amputation. The limb was enormously swollen, and appearances indicated that the patient would probably lose his life. Fomentations of warm water were employed, and continued two weeks, when the condition of the patient was such that the bath could be substituted, and that was continued for five weeks, and then return was made to the fomentations. The man was wounded in Aug., 1873, and Nov. 1, 1873, the wound was closed.

The ninth case was an injury of the foot in which the bones and flesh were broken and crushed by the falling of a heavy weight upon it. The third day the condition of the limb was such as ordinarily demands amputation. It was at once submersed in water at a temperature of 90° F. The gangrene was at once arrested, and the man made a good recovery.

The tenth case was one in which the leg had been traversed by a street-car. The patient was in excellent health at the time of the occurrence of the accident. At the end of thirty-six hours after the accident the limb was enormously swollen, fracture of both bones was found, but there was no laceration of the soft parts. Inflammatory action had set in before the patient was reached, and immediate amputation was not warranted. Fomentations were applied and changed hourly. Vitality in the limb diminished, and gangrene set in. The gangrene implicated all the parts injured, but *did not extend above* the line at which the car-wheel traversed the limb. Amputation was performed in imitation of Esmark's method, and the loss of blood was very slight. The water-dressings were continued, and the case is doing well.

Dr. Rose remarked that, in his experience with water-dressings in surgery, he had found a temperature of 60° uncomfortable to the patient, but that a temperature of 86° or 90° can be very comfortably borne. The benefit of this treatment may be especially seen in those cases where it is difficult to determine whether amputation should be performed or not. Place the limb in a warm-water bath, and the question of amputation may be fully considered before it is performed.

Reference was made to the Report of Billroth, who gives 277 cases of injuries of the hand treated in this manner, and only three cases of pyæmia were developed. The action attending the slight lowering of the temperature, such as obtained by a water-bath at 90°, is more powerful than even the application of ice-bags. According to his experience, the warm-water dressings had prevented both local and general reaction after injuries. In some cases, where suppuration is nearly established, these dressings may prove injurious. Granulations may be caused to swell and obstruct the free discharge of pus, inasmuch as pus is not itself soluble in water. According to his experience the average length of time that submersion is employed is fourteen days. During the first twenty-four hours after the removal of the part from the bath, both local and general temperature will be considerably increased, and this will usually last for some days. This again is evidence of the power that the warm-water baths or fomentations have on the reduction of temperature.

Dr. Weber mentioned three cases of warm-water dressings, as illustrative of his experience in its use, which substantially sustained the views already expressed by Drs. Hamilton and Rose. The temperature which he commonly employed was about 90° F.

Dr. Sell referred to the uniformly bad results attending the use of hot poultices at the siege of Paris, and desired some explanation upon that point, inasmuch as we have been led to regard the application of water in the manner of fomentations as nothing more nor less than a poultice.

Dr. Rose suggested that the water-dressing prevented the occurrence of certain foments which would cause a great deal of reaction. The hot poultice is ordinarily constituted of material which would contribute largely to the production of fomentation, hence the great disadvantage attending its use.

Dr. Howard remarked that he had treated many thousands of cases by the use of cold-water dressings, and it would be very natural for him to contrast the cold-water treatment with the warm-water treatment. Regarding cold water, it will be admitted by all that it has a vast diversity of uses and effects. It may be very highly valuable, or it may be as full of danger.

In military surgery the patient ordinarily has been cut down in full strength, and there is present every ability for reaction and over-reaction. The danger is usually from over-reaction. Under such circumstances the cold water may be used very freely, and, as a rule, it is the best dressing. On the contrary, when the patient is in a low condition constitutionally, and when the wound is in the lower extremities, where we have in addition perhaps a low local vitality, then the application of cold water, especially if long continued, would do much harm. Adhesion by first intention may be absolutely prevented by the application of cold water under such circumstances.

The irregular application of cold water has induced tetanus, and may favor the development of other surgical diseases. Such he believed to be the fact, and the opinion was based more especially upon his experience at the battle of Antietam, where a great amount of tetanus was seen. It is therefore seen that cold water is beneficial in certain cases, and in other cases may be very injurious.

In the use of warm water, we may start by assuming that it is usually beneficial, and, perhaps, in no case is it dangerous, or no case can be related where it has been followed by bad results produced by itself.

The valuation of warm water may be considered under three heads: First, the maintenance of an equable and proper temperature of the part; second, the complete exclusion of all animalculæ; third, continued immersion of the parts.

The value of the warm water over the cold water, upon the first point, is this: the cold water, if too cold, may lower the vitality of the part too much, and, if continued too long, may do serious injury.

Warm water, on the contrary, will abstract an undue local heat without reducing the vital heat lower than may be desirable. However long continued, if the proper temperature is observed, there can no harm come from the reduction of the temperature of the part. It will completely exclude animalculæ, and by continued immersion it promotes continued capillary circulation.

In closing, the Doctor threw out two questions: What is the cause of the œdema which occurs in every case? Is there any osmosis in the case? Next, What is the action which promotes capillary circulation? Fortunately, there is one principle to guide us in the continuance of either cold or warm water. If *pain* is produced, it is evidence that a change should be made, and the change from cold to warm is the most common.

Dr. Jacobi wished simply to refer to the fact that the indications for cold or warm water will vary according to the individual. Cold-water bathing is especially beneficial to those who have a vigorous constitution and a high degree of reaction, and it is well known that other individuals will derive the same benefit from the use of the warm bath. The difference consists simply in the fact that there is a more vigorous circulation in the one than in the other, and the same effect will be obtained in both cases. The same principle may be applied to the treatment of wounds. There is one point which might have been settled more positively, and that is that ice-cold water applications should be contrasted with hot-water applications; cold-water bathing with warm-water bathing, etc., if we would form a proper estimate of their comparative value. The idea of constitutional peculiarity might be carried still farther, and the same principle be applied with regard to cold or warm air. Different persons in the same pathological condition may be favorably affected, the one by being exposed to cold air, and the other by being exposed to the influence of warm air. The study of the constitutional peculiarities of each patient should enter into the treatment of every case.

Dr. Grant dissented from the opinion expressed by Dr. Howard with regard to the development of tetanus.

Dr. Howard replied that he saw fourteen cases in one hospital where the wounds were dressed with extra-cold water, and threw out the suggestion thinking that there might be some value in it.

Dr. Caro referred to the treatment of old ulcers, in his service, in the years 1844 and 1845, in *Sicily*. Cold water was the chief application, and in the obstinate ones immersion of the part was attended with the greatest success. It was thought at the time that the success of the treatment depended materially upon the exclusion of animalculæ from the surface of the ulcer.

Mrs. Dr. Jacobi presented a single question, and that was, Whether the œdema spoken of as being present in every case, was not due largely to an exosmosis of the fluids from the distended blood-vessels, and whether that action does not prevent the accumulation of white blood-globules, which is the cause of suppuration?

Dr. Hamilton replied that it would be exceedingly rational to suppose so. When the limbs are in the baths they are always dependent, and the question has arisen whether the dependence of the limb would not explain the success of the treatment; but the success of the treatment is altogether out of proportion to be the mere result of dependence.

Dr. Hamilton mentioned that the application of cold on the army was essentially a warm-water application, for the cloth, although applied cold, is not changed, perhaps, for several hours, and becomes thoroughly heated.

Dr. J. G. Adams.—At a quarterly meeting of the trustees of the College of Physicians and Surgeons, held on the 11th instant, Dr. John G. Adams was elected trustee, in place of John Torrey, M.D., LL.D., deceased.

Medical Items and News.

The Academy of Medicine.—The twenty-sixth anniversary of the founding of the New York Academy of Medicine was duly celebrated on Thursday evening, Nov. 20. The annual address, on "Parasitic Growths," was delivered in the hall of the College of Physicians and Surgeons, corner of Twenty third street and Fourth avenue, by Dr. John C. Dalton, after which the members repaired to the Ashland House to partake of a supper.

The toasts were as follows:—

"New York Academy of Medicine—*Una fides altare commune*—gathered on this twenty-sixth anniversary, its Fellows renew their expression of veneration of the wisdom of its founders, and renew their pledges to maintain the noble purposes for which it was designed." Responded to by President Flint.

"Divinity, Law, and Physic, triplets nurtured by Faith, animated by Hope, inspired by Charity." Responded to by Dr. Post for the clergy, Edgar S. Van Winkle for the Bar, and Dr. A. M. Bell, of Brooklyn, for the physicians.

"The Building Fund." Responded to by Dr. James Anderson.

The festivities closed shortly before midnight.

The American Public Health Association convened in New York on Tuesday, November 11, 1873, in accordance with the adjournment of the annual meeting. The following papers, which, without exception, were of great interest to the general public, were read in the course of the three days' session.

The meetings were held in the hall of the Union League Club, Madison avenue, corner of East Twenty-sixth street.

Tuesday, November 11.—Address by the President, Dr. Stephen Smith, N. Y. On "Foreign Hospitals," by Dr. Beekman. A report upon the "Influence of Existing Social Systems upon Health and Longevity," by Francis Bacon, M.D., of New Haven, Ct. 2. A paper upon "Perfection of Structure and Function in the Human Body, as a Leading Element of Hygiene," by Nathan Allen, M.D., of Lowell, Mass. 3. A report upon "The Power of the Housekeeper over, and Responsibility for, the Health of the Family," by Edward Jarvis, M.D., of Dorchester, Mass. 4. A report upon the "Physical and Moral Causes of Bad Health in American Women," by James E. Reeves, M.D., Wheeling, W. Va. 5. A paper upon "Relations of Climate to Tuberculosis, and the Relations of Phthisis to other Diseases," by Henry A. Johnson, M.D., of Chicago, Ill. 6. A paper upon "Relations of Race and Nationality to Mortality in the United States," by Gen. Francis A. Walker, Superintendent U. S. Census, Prof. Political Economy, etc., New Haven, Ct.

5 o'clock P. M.—A report on "Sanitary Relations and Health Principles of Architecture," by Carl Pfeiffer, C.E., Secretary of the American Institute of Architects.

7.30 o'clock P.M.—Edwin M. Snow, M.D., Rhode Island, presiding. "Presentation of a Summary of Evidence and Local Reports upon Cholera as it has prevailed in the Mississippi Valley and elsewhere in America during the Present Year." Illustrated with maps and explained by members of the Association from the various localities: C. B. White, M.D., President of the Louisiana Board of Health; Ely McClellan, M.D., U. S. Army, of Kentucky; J. H. Van Deman M.D., of Chattanooga, Tenn.

Wednesday, November 12.—The morning and afternoon sessions were devoted to reports upon the sanitary care of cities and utilization of refuse.

11 o'clock A.M.—Special reports upon topics in physical knowledge relating directly to hygiene: "The Sanitary Care and Utilization of Refuse of Cities," by Dr. C. A. Leas, of Baltimore, and Mr. Storer, of Boston. A report upon "Alimentation Considered in its Relations to the Progress and Prosperity of the Nation," by A. C. Hamlin, M.D., of Bangor, Me. A report upon "Non-Periodic Changes of Heat as an element in Sanitary Climatology," by Lorin Blodget, Esq., of Philadelphia. A report upon "Sewerage," by Hon. C. C. Cox, M.D., President of Board of Health, Washington, D.C. The afternoon session was devoted to discussion on yellow fever, and a paper, "Relations of Race and Nationality to Mortality in the U. S.," by Gen. F. A. Walker.

7.30 P.M.—C. B. White, M.D., Louisiana, presiding. "Discourse upon the Future Distribution and History of the Population of the United States, as affected by Physical Geography" [illustrated with maps], by J. S. Newberry, M.D., LL.D., State Geologist of Ohio, and Prof. of Geology, School of Mines, Columbia College. A paper upon "Evidences of the Relations of Drinking-Water to the Propagation or Localization of Typhoid Fever and other Diseases," by Austin Flint, M.D., of New York.

Thursday, November 13.—A paper upon "Sanitary Organization in Villages and Rural Districts," by Ezra M. Hunt, M.D., of New Jersey. Report upon the "Sanitary Chemistry of Waters and the Practical Methods of Perfecting the Water Supply of Towns and Cities," by C. F. Chandler, M.D., LL.D., President New York Board of Health, and Prof. of Chemistry in the School of Mines, Columbia College. "The Principles and Practice of Quarantine in the Ports and Cities of the United States," remarks by Dr. S. Oakley Vanderpoel, H. O. of the port of New York. A report upon "House-to-House Inspection, and the Sanitary Care of the Sick when Cholera is Impending," by Stephen Smith, M.D.

Evening.—Hon. Dorman B. Eaton, presiding. Addresses in Association Hall, south-west corner Twenty-third street and Fourth avenue. 1. An address upon "Sanitary Science in its Relations to Public Instruction," by Hon. Andrew D. White, LL.D., President of Cornell University. 2. An address upon the "Germ-Theory of Disease in its Relations to Hygiene," by F. A. P. Barnard, LL.D., President of Columbia College. 3. An address upon the "Relations of Hygiene to Pauperism and Insanity," by John Ordronaux, M.D., LL.D., of New York, State Commissioner in Lunacy, and Member of State Board of Charities. Dr. Stephen Smith was re-elected President; Dr. C. B. White, of N. O., First Vice-President; Dr. E. Harris, M.D., Secretary. The next meeting will be held in Philadelphia.

DR. S. O. VANDERPOEL AND QUARANTINE.—The following resolutions were passed by the Medical and Surgical Society of New York:—

Resolved, That the thanks of the Society be tendered to Dr. Vanderpoel for the very agreeable entertainment we have this day enjoyed.

Resolved, That we avail ourselves with great satisfaction of the present opportunity of expressing our approval and admiration of the able, efficient, upright manner in which he has hitherto discharged the arduous and responsible duties of his position as Health Officer of the Port of New York; an office involving most important interests affecting the health and commercial prosperity of our city.

Resolved, That a copy of these resolutions, duly authenticated, be communicated by the Secretary to Dr. Vanderpoel, and that a copy be sent to THE MEDICAL RECORD for publication.

(Signed)

GEO. A. PETERS, M.D., *President*,
GEO. G. WHEELOCK, M.D., *Secretary, Medical and Surgical Society, New York.*

September 27, 1873.

INFANTILE MORTALITY.—During 1871 there died in New York city 10,701 children less than two years old, or 39.6 per cent. of the total mortality, the percentage in 1870 having been 40.8 per cent. There occurred 8,042 deaths of infants one year old and under, of whom 1,083 or 13.4 per cent. died in hospitals. The mortality of children less than five years of age amounted to 12,791 or 48 per cent. of the total, a slight gain upon the previous year.

EPILEPSY AMONG CRIMINALS.—J. B. Thomson, Resident-Surgeon to the General Prison for Scotland at Perth, states, that out of a prison population for ten years amounting to 6,273, or 627 per annum, the percentage of criminal epileptics under his charge was 0.94, or nearly one per cent. per annum—very different from the army and civil population of England, where the death-rate of epileptics is estimated at 0.009 per cent. only—showing a great excess of epilepsy among criminals.

ALCOHOLISM.—The report of the New York Board of Health for 1872 shows that alcoholism proper, as a direct cause, was credited with 220 deaths in that year, of which delirium tremens occasioned 101. An accurate record, however, was kept throughout the year of *all* cases where intemperance was certified to have been *instrumental* in producing death, and the result of this inquiry was as follows: 556 cases, 300 being males and 256 females—about 11 each week. But 7 of these inebriates passed beyond the age of 70, but 18 beyond 65, and 45 beyond 60 years. The largest proportion of deaths (102) took place between 35 and 40; ten fell victims between 15 and 20 years of age, and 48 before they had arrived at 25. In 225 instances, no occupation was stated upon the certificate, most of these being females. Seventy of those given were laborers, 19 clerks, 18 carmen or drivers, 13 carpenters, 8 pedlars, 8 machinists, 8 liquor dealers, 7 bartenders, 7 butchers, 7 painters, 7 shoemakers, 6 blacksmiths, 6 boatmen, 5 merchants, 5 grocers, besides other occupations—315 were Irish, 125 Americans, 61 Germans, and 20 English.

CENTENARIANS.—During the year from April 11th, 1871, to April 10th, 1872, 14 persons died in New York city who were 100 years old or more, of whom one was said to be 108, one 106, one 105, two 103, and two 102 years old. Ten of the centenarians were Irish females, 3 Irish males, and 1 a West Indian female.

TUMORS OF THE BRAIN.—T. S. Clouston, M.D. (*Jour. Mental Science*), gives the history of six cases of tumors of the brain, which fell under his observation out of 214 autopsies, being in the proportion of 28 to 1,000. The statistics furnished by several authors on the subject are noted, but in none of them were tumors found in so great a percentage of cases.

ACONITINE FIRST DISCOVERED.—Geiger and Hesse, in 1833, each by his own process, first extracted from the leaves of Aconitum Napellus, a peculiar substance—bitter, amorphous, extremely powerful in its action on the animal economy—to which they gave the name of *Aconitine*.

Pennsylvania Hospital for the Insane.—The thirty-second annual report of this hospital for 1872 presents the following particulars: At the date of the last report there were 372 patients; 325 were admitted during the year, and 302 were discharged or have died, leaving 395 at the close of the year. The number of males admitted during the year was 182, and the number of females 143. Of the patients discharged, there were—

	Males.	Females.	Total.
Cured,	65	62	127
Much improved,	10	25	35
Improved,	38	21	59
Stationary,	19	13	32
Died,	32	17	49

Of the patients who died, 24 were admitted for mania, 9 for melancholia, 1 for monomania, 14 for dementia, and 1 for delirium.

Since the opening of the hospital 6,390 patients have been admitted, and 5,995 discharged. Of those admitted 3,403 were males and 2,987 females; 2,922 were single, and 2,923 were married. During the last 32 years $344,553.77 were expended, or $10,767.30 per annum. *Physician-in-Chief and Superintendent*, Thomas S. Kirkbride, M.D.; *Ass't Physicians*, Drs. S. Preston Jones and William P. Moon; *2d Ass't Physician*, Dr. William H. Bartles.

Association of American Medical Editors.—The following officers have been chosen for 1874: President—Dr. W. K. Boling, of Nashville, Tenn. Vice-President—Dr. W. S. Edgar, St. Louis. Secretary—Dr. F. H. Davis, Chicago, Ill. Committee on Prize Essays for 1874—Drs. N. S. Davis, Chicago; J. P. Logan, Atlanta; and J. M. Toner, Washington.

Epidemiological Society of Maryland.—This Society grew out of the appointment of about one hundred medical men "by the Baltimore City Fathers," to serve as a vaccine association at a monthly stipend, to continue in force for six months, in order to combat and stamp out the present epidemic small-pox, which they have accomplished pretty effectually, as well as organized the above-named Society, and formed a constitution, by-laws, and appointed committees on the various epidemics, as well as to appoint foreign correspondents—Prof. Ed'w. Warren, late of Baltimore, to act as such in Egypt, while serving in the army of the Khedive.

Chautauqua County Medical Society (N. Y.), at the annual meeting at Dunkirk, July 8, 1873, elected officers for ensuing year, viz.: President, Ai. Waterhouse, M.D., Jamestown; Vice-President, S. M. Smith, M.D., Dunkirk; Secretary and Treasurer, T. Charles Wilson, M.D., Portland.

What it Costs to Support Hospitals in New York City.—According to the official estimates for 1873 we have the following: *Department of Charities and Corrections*:—Out-Door Poor Department, $128,066; Bureau of Out-Door Sick Poor, $5,300; Bellevue Hospital, estimated number of patients 700, $103,370, or $147.67 each patient; Charity Hospital, estimated number of patients 950, $133,302, or $140.31 each patient; Hospital for Contagious Diseases, 180 patients, $20,667; Fever Hospital, 60 patients, $6,179; Small-Pox Hospital, 175 estimated inmates, $24,950; Hospital for Incurables, $13,393; Asylum for the Blind, 150 inmates, $8,055; Convalescent Hospital, 250 inmates, $22,041; Lunatic Asylum, 1,300 patients, $119,919, or $92.25 per patient; New York City Asylum for Insane, 650 patients, $83,026, or $127.72 per patient; Hospital for Epileptic and Paralytic Patients, 120 patients, $13,172; Hospital for Infants, 450 children, $51,780, or $115.06 per child; Randall's Island Nurseries, 650 inmates, $61,282, or $93.58 per inmate; Nursery Hospital and Idiot House, Randall's Island, 450 inmates, $47,887; Inebriate Asylum, $23,611; Reception Hospital, Centre street, $10,180; Reception Hospital, 115th Street, $5,920; Ambulance Establishment, $3,995; General Drug Department, salaries, $2,500. Total, $888,595, as the estimate for the above hospitals, etc., Department of Charities and Corrections.

"Rest" in the Treatment of Consumption of the Lungs.—Dr. I. B. Berckert recommends the maintenance of rest of the thoracic walls as an important element in the treatment of diseases of the lungs, for the same reason that it is resorted to in inflammation of joints and other organs. It is to this fact that he attributes the relief experienced by persons who apply plasters of different sorts to the walls of the chest in order to prevent or relieve the pain accompanying pulmonary troubles. In his own practice he depends on the application of strips of adhesive plaster.—*The Lancet*, Oct. 18, 1873.

Dysidrosis.—In the *Br. Med. Jour.* of Sept. 27, Tilbury Fox describes an eruption, unmentioned before, which he terms *dysidrosis*. The disease is dependent upon a disordered condition of the sweat-follicles, and has heretofore been confounded with eczema, which it resembles at first sight. Owing to obstruction of the sweat-follicles, the secretion collects in the form of vesicles, which coalesce, to form bullæ; papulæ result from the abortion of vesicles, and white patches are caused by uplifted cuticle, which has become macerated by sweat. The disease varies greatly in extent and duration; it may happen that one or several successive outbursts of the eruption occur, and the disease may last a week or ten days, or several weeks if there are several exacerbations. In the treatment, Dr. Fox depends mainly upon diuretics, with large doses of quinine, nux-vomica, and sometimes arsenic. Soothing local applications are employed, according to the requirements of each case.

Athetosis.—Another case of this peculiar nervous affection is reported by Dr. H. S. Purdon, of Belfast.

Bloodless Operations.—*The Lancet* of Oct. 11, speaking of the plan which has recently been adopted by Esmarch for preventing hemorrhage during operations upon extremities, says that it has been introduced into England by Mr. Wm. McCormac, of St. Thomas's Hospital. The method is not exactly new, and was practised by Stromeyer and Langenbeck twenty years ago, and more recently by an Italian surgeon named Silvestri. The details are as follows: An elastic bandage about two inches and a half in width, and from five to ten yards long, is firmly bound around the limb, commencing at the toes or fingers, as the case may be, and is then continued upwards so as to drive the blood before it out of the veins and arteries. When the desired point has been reached, a strong india-rubber band, about half an inch in diameter, is tightly drawn two or three times around the limb, just above the elastic bandage, and fastened by hooks. The bandage is then removed, leaving the tissues blanched and exsanguined. Not a particle of blood is lost during the operation, which is really more bloodless than when performed on the dead subject. After the operation is completed the india-rubber rope is removed, and the blood then finds its way into the vessels, which are ligatured or twisted according to the inclination of the surgeon. On this plan, which has been carried out at

St. Thomas's, Guy's, London, and St. Bartholomew's Hospitals, many operations have been performed, including excision of the knee and elbow joints, amputations, and the removal of dead bone; and Mr. Wagstaff has recently amputated through the thigh, for gangrene of the foot, on this plan—the precaution having been taken to commence the application of the elastic bandage several inches above the mortified part. No ill effects have thus far been observed from the use of this contrivance. Although the durations of the operations have varied from a few minutes to half an hour, and even more, during which time the circulation has been completely arrested, no evidence has been afforded of the formation of emboli or thrombi in any case.

THE TREATMENT OF BURNS AND SCALDS.—Dr. De Breyne highly recommends the following treatment in *L'Union Pharmaceutique*: Hydrate of lime (newly precipitated), forty-five grains; glycerine, five ounces; chloric ether, forty-five drops. It makes up a transparent, colorless liquid, with an agreeable odor, and an alkaline reaction, according to the amount of hydrate of lime. It calms the pain and prevents or abates inflammation.

PUERPERAL FEVER IN AUSTRALIA.—*The Australian Med. Jour.* for July speaks of the existence, apparently for the first time in that country, of an epidemic of puerperal fever, which began in May and continued through it and the two following months. At a meeting of the Medical Society of Victoria, Dr. L. J. Martin read a paper on the subject, and adduces a number of observations in proof of the atmospheric origin of the disease.

IMPERFORATE ANUS.—M. Verneuil, in a communication made to the *Soc. de Chir.*, of Paris, proposes a modification of Amussat's proceeding in the case of those notoriously difficult and uncertain operations, performed for congenital imperfections of the lower part of the rectum, which consists in the simultaneous resection of the *os coccygis* in whole or in part, and the establishment of the artificial anus at a position slightly behind and above the normal situation. The value of his method is vindicated by the record of six cases in which he has adopted it with complete success. The advantages he claims for it are: The innocuity of the excision; the considerable and safe enlargement of the field of operation attained by it, thereby facilitating all the steps of the undertaking and much shortening it; the much-increased facility of finding the gut; and, above all, the greater ease and certainty with which the bringing down and attachment to the cutaneous parts of the mucous membrane (which form the cardinal points in Amussat's design) can be accomplished.—*Jour. des Connaissances Méd.*, Aug., '73, and *Irish Hosp. Gaz.*, Oct.

ENLARGEMENT OF BRONCHIAL GLANDS.—Dr. Guensan de Mussy, in a paper read before the section of Medicine at the late meeting of the British Med. Association, observed that the enlargement of the bronchial glands noticed by the anatomists as very common, has been described by the pathologist only in its most severe forms and is very rarely met with in adults. It is, however, he thinks, very common. It may complicate all the affections in which the respiratory organs are concerned and modify both the physical and physiological symptoms of these affections. It usually produces cough or dyspnœa, in some cases aphonia and vomiting, according to the relations of the enlarged glands to portions of the pneumogastric nerve. Protracted whooping-cough, lasting, it may be, some years, is connected with this enlargement. The physical sounds are rubbing, impairment of elasticity, and acute percussion sounds at the upper part of the sternum, the inner part of the first two ribs, the intercostal spaces, and the sterno-clavicular joint, and posteriorly over the laminæ of the first four vertebræ, usually on one side. On auscultation there are weakness, acuteness, roughness of the respiratory murmur in one part or in the whole of one lung; generally protracted respiration, sometimes localized sibilant rhonchus; and very often, near to the spine and to the sternum, an expiratory *souffle*, which is the tracheal respiration conducted by the enlarged glands. Sometimes these sounds may be modified by the movements of the neck. The treatment recommended by Dr. De Mussy was iodine internally, and locally chloride of sodium, arseniate and carbonate of soda, and such general means as improve the lymphatic constitution.—*Br. Med. Jour.*, Aug.

THE CAUSE OF KLEPTOMANIA.—The most ingenious explanation ever proffered perhaps in explanation of this peculiar diathesis was that lately stated in New Jersey, "because the individual had been vaccinated with virus from a hooking cow."

REMOVAL OF THE SPLEEN.—The *Raccoglitore Medico* contains a history of a case by Dr. Sonsino in which, on the 20th of June, Dr. Attilio Urbinato, of Cesino, removed a hypertrophied and movable spleen. The incision was about seven inches in length, and was prolonged above the umbilicus. Little difficulty was experienced in the operation, and but few vessels required the ligature. The patient died three days afterwards of peritonitis. The spleen weighed two and a half pounds.

ABUSE OF NUX-VOMICA AND ITS ALKALOIDS.—Dr. James Thompson, of Leamington, writes to the *British Med. Jour.* of Oct. 11, that he is satisfied of an increasing disposition on the part of many people to resort to nux-vomica as a stimulant, and cites a few cases in which the practice had led to serious results.

THE KHEDIVE OF EGYPT is about to construct a hospital at Emirghian, on the Bosphorus. The institution will, it is said, be a model one of its kind as regards the plans for the complete separation of the sexes, and of diseases of a contagious nature from others, without interfering with the administration of the establishment.

THE AGE OF EGGS.—*The Lancet* quotes the following from a French authority as a mode of ascertaining the age and consequent freshness of an egg: Dissolve 120 grammes of common salt in a litre of water. If the egg is one day old, it will sink to the bottom; if it was laid the day before, it will not reach the bottom; if three days old, it floats, and if more than five, it comes to the surface, and the shell projects more and more according to staleness.

MORTALITY AMONG CLERGYMEN.—Of 236 clergymen, whose deaths and ages were reported last year, 7 were over 90 years old, 29 were between 80 and 90, 46 between 70 and 80, 49 between 60 and 70, 61 between 50 and 60, 23 between 40 and 50, 22 between 30 and 40, and 9 between 20 and 30. The average age at death was about 61.

DR. BEVERLEY ROBINSON.—In the last number of THE MEDICAL RECORD (November 15), the abstract of a lecture on Laryngeal Phthisis, by Dr. Morell Mackenzie, London, should have been credited to Beverley Robinson, M.D., as the writer.

THE "New York Laryngological Society" has been organized. The Society is composed of professed

laryngoscopists of New York and vicinity, and has for its object the "promotion of the study of affections of the larynx, pharynx, and adjacent parts;" meetings to be held on the second Thursday of each month, at the residences of the members.

The officers are: *President*, Robert F. Weir, M.D.; *Vice-President*, Clinton Wagner, M.D.; *Secretary*, Woolsey Johnson, M.D.; and an Executive Committee of three members: Dr. Morris J. Asch, Dr. Charles McBurney, and Dr. Beverley Robinson.

The Medical Victims of Yellow Fever at Memphis.—At a meeting of the members of the Medical Profession, held in the parlors of the Peabody Hotel in Memphis, Tenn., on the 7th of November, 1873, Dr. J. H. Pittman was called to the chair, and Dr. E. Miles Willett appointed Secretary.

Dr. A. Erskine, Dr. Avent, and Dr. W. V. Taylor having been selected as a committee for the purpose of presenting resolutions expressive of the sentiments of the assemblage, reported the following, which were unanimously adopted:

Whereas, It has pleased Almighty God, the Great Ruler and Arbiter of the destinies of men, to visit our city with a malignant pestilence, which has swept away in its desolating march seven of our professional brethren and friends, viz.: Drs. Crone, Minor, Kennon, Hatch, Blount, Freeman and Williams; therefore be it

Resolved, That we who have been so fortunate as to have passed safely through its ravages do deplore and mourn their fall with a true and manly sorrow.

Resolved, That in their deaths the medical profession of Memphis, and the profession throughout the land, have sustained losses immeasurably great.

Resolved, That we feel a common sympathy and a personal affliction, the result of a common sorrow, and the rupture of the tenderest ties of sympathy and love.

Resolved, That humanity, affected and bereaved, weeps over their fall. On its altar they, with manly devotion, laid down their lives.

Resolved, That the city of Memphis could have sustained no greater sacrifice than the death of her noble and gifted physicians.

Resolved, That we tender to the families of the deceased our sincerest sympathies in their irreparable loss.

Alex. Erskine, M.D.
B. W. Avent, M.D.
W. V. Taylor, M.D.

E. Miles Willett, M.D.,
Secretary.

New York Physicians' Mutual Aid Association.—The annual meeting of the New York Physicians' Mutual Aid Association was held Nov. 13, 1873, for the election of officers for the ensuing year, which resulted as follows:

James Anderson, M.D., *President*; W. W. Reese, *1st Vice-President*; Austin Flint, *2d Vice-President*; C. T. Hubbard, *Treasurer*; W. R. Gillett, *Rec. Secretary*; S. Ayres, *Asst. Secretary*; Wm. H. Thayer, *Cor. Secretary*.

Trustees for one year: Geo. A. Peters, Erskine Mason, Ernest Krackowizer.

Trustees for two years: Joseph Kammerer, J. R. Van Kleeck, W. J. Percell.

Trustees for three years: Geo. J. Bennett, M. Herzog, J. S. Monell.

The Association is increasing in numbers. It has a permanent fund already of $1,345.50. Five deaths have occurred during the past year.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from November 4, 1873, to November 18, 1873.

McParlan, T. A., Surgeon.—Assigned to duty at Fort Leavenworth, Kas., as post surgeon. S. O. 169, Dept. of the Missouri, October 31, 1873.

Hasson, A. B., Surgeon.—Granted twenty days' leave of absence, provided he furnishes satisfactory medical attendance during his absence. S. O. 59, Headquarters Military Division of the Atlantic, November 12, 1873.

Ghiselin, James T., Surgeon.—So much of S. O. 206, October 15, 1873, from this office, as relates to Surgeon Ghiselin, is revoked. S. O. 217, War Dept., A. G. O., November 3, 1873.

McKee, J. C., Surgeon.—To report to the Commanding Officer of the Presidio of San Francisco, to relieve Asst.-Surgeon De Witt of his duties at that post. S. O. 130, Headquarters Dept. of California, October 30, 1873.

McClellan, Ely, Assistant Surgeon.—Relieved from duty at Headquarters Department of the South, and to return to his proper station, Lebanon, Kentucky. S. O. 189, Department of the South, October 31, 1873.

Wolverton, W. D., Assistant Surgeon.—Leave of absence extended thirty days. S. O. 219, War Department, A. G. O., November 5, 1873.

Wolverton, W. D., Assistant Surgeon.—To report to the Commanding General, Department of the South, for assignment to duty. S. O. 227, War Department, A. G. O., November 14, 1873.

Greenleaf, Charles R., Assistant Surgeon.—To report to the Commanding General, Department of the South, for assignment to duty. S. O. 227, War Department, A. G. O., November 14, 1873.

Knickerbocker, B., Assistant Surgeon.—Assigned to duty at Camp Harney, Oregon. S. O. 146, Department of the Columbia, October 17, 1873.

Waters, W. E., Assistant Surgeon.—Relieved from duty at Fort Leavenworth, Kas., and assigned to duty at Fort Riley, Kas., as Post Surgeon. S. O. 169, Department of the Missouri, October 31, 1873.

Caldwell, D. G., Asst. Surgeon.—Relieved from duty in the Dept. of the South, and to report to the Commanding General, Dept. of Texas, for assignment to duty. S. O. 227, War Dept., A. G. O., Nov. 14, 1873.

Taylor, M. K., Asst. Surgeon.—Relieved from duty in the Dept. of the South, and to report to the Commanding General, Dept. of Texas, for assignment to duty. S. O. 227, War Dept., A. G. O., Nov. 14, 1873.

De Witt, Calvin, Assistant Surgeon.—On being relieved by Surgeon McKee, to comply with Paragraph 9, S. O. 197, C. S., from the A. G. O. S. O. 130, Headquarters Department of California, October 30, 1873.

Kimball, J. P., Asst. Surgeon.—Leave of absence extended thirty days. S. O. 99, Headquarters Military Division of the Missouri, Nov. 5, 1873.

Patzki, J. H., Asst. Surgeon.—To report in person to the Commanding General, Dept. of the Platte, for assignment to duty. S. O. 227, War Dept., A. G. O., Nov. 14, 1873.

Matthews, Washington, Asst. Surgeon.—Assigned to duty at David's Island, New York Harbor. S. O. 59, Headquarters Military Division of the Atlantic, Nov. 12, 1873.

Original Lectures.

CLINICAL LECTURE ON CHRONIC ALBUMINURIA.

DELIVERED AT BELLEVUE HOSPITAL, N. Y.

BY PROF. AUSTIN FLINT, M.D.

(Phonographically reported for THE MEDICAL RECORD).

GENTLEMEN: The topics which I shall present to you to-day embrace many features which are of much interest and importance, but which I shall be able to consider only in part. We have already considered acute desquamative nephritis, and now I wish to introduce for your consideration and study the different forms and manifestations of chronic disease of the kidneys. The existence of these affections is recognized by the changes which are manifested in the urine, and also by certain consequences resulting from renal disease. I wish to call your attention to certain points which will somewhat simplify and systematize your study, and I shall ask you to carefully read what has been written by some standard author or authors upon the different forms of chronic degenerative diseases of the kidneys, the effects which result from these different forms, and the circumstances which are involved in the differentiation, each from the others.

The most generally adopted classification of chronic diseases of the kidneys, or chronic Bright's disease, embraces four forms, namely: The large white kidney; the cirrhotic, or fibroid kidney; the fatty kidney, which some authors do not regard as a distinct form; and the amyloid, waxy, or lardaceous kidney. What effects do these different affections severally and collectively produce in the body?

These may be conveniently arranged in two classes: First, a diminished density of the blood due to a constant elimination of albumen in the urine. This undoubtedly is an important element in the production of the dropsy which is so constantly present in these affections; but I would not be understood as saying that the loss of albumen, and consequent reduction in density of the blood, is the sole cause of the dropsical manifestations.

The second class embraces effects which are due to the retention in the blood of excrementitious materials which should be eliminated from the system by the kidneys.

With the impoverished condition of the blood, which is in proportion to the loss of albumen, we have the dropsy, anæmia, and all those ulterior effects which arise from an anæmic condition; and with the second class, we have all the effects which arise from the morbid conditions of the blood caused by the retention of the excrementitious constituents of the urine.

The symptoms to which the latter of the two classes of effects give rise may be divided into the minor and grave symptoms. Among the minor symptoms are headache, nausea, and vomiting; looseness of the bowels, muscular cramps, etc. These are important symptoms, for the reason that they furnish evidence of a renal affection leading us to investigations which relate to the kidneys. More serious symptoms are those which denote inflammations, chiefly of the serous membranes; namely, pericarditis, pleuritis, and meningitis. Still graver symptoms are convulsions and coma. With this brief outline, I shall bring before you cases illustrative of chronic renal disease.

The first case is a girl æt. 18, a domestic. The countenance of this patient is quite typical. It is pallid, showing anæmia; and puffy, showing dropsy. There is a certain amount of anasarca present, not marked, but sufficient to show that the dropsy is diffused through the areolar tissue. A very reliable method of determining whether diffused dropsy is present or not, even in a very slight degree, is to make pressure over the sternum. If there be œdema, it can be recognized at that point. An important question to be decided now is, does the dropsy in the present case arise from an affection of the kidneys, or from an affection of the heart? It may be laid down as a general rule that, if there be much general dropsy, unaccompanied by difficulty in breathing, the dropsy can hardly arise from cardiac lesion. There is no evidence of heart-disease in this case. Examination of the urine gives a s. g. 1018 acid; it contains considerable albumen, epithelial and granular casts and urates.

Let us now turn to the history of the case. Her family history is good. Patient is temperate; no evidence of specific disease. Two years ago—and this is a point of much interest—the patient had scarlet fever. It will be recollected that, while studying the acute form of Bright's disease, your attention was called to the fact that a great majority of the cases of acute albuminuria, or tubal nephritis, are cases in which the affection is a sequel of scarlet fever. It was also remarked that the acute affection rarely terminates in a chronic condition. But it seems probable that the case before us is a chronic affection, and that it dates its commencement from the occurrence of the scarlet fever; in other words, that we have here a chronic affection of the kidney following an acute tubal nephritis. Since she had the scarlet fever her feet, face, and body have occasionally become puffy, and the amount of urine passed has been sometimes quite scanty. Her face has never regained its natural color, and her strength has been very much diminished. She dates her present sickness at four days before her admission into the hospital. While in a profuse perspiration she sat down in a current of cold air, and she was seized with slight chill, with severe pain in the left side and afterwards in the right side. Upon admission the pulse was frequent, the temperature raised, and the respirations rapid. To-day a physical examination of the chest reveals fluid in both pleural cavities. Now a question of interest is, is this hydrothorax dependent upon the renal disease, or is it a case of double pleurisy? I do not hesitate to say that it is a case of double pleurisy. It is a case of double pleurisy which proceeds from renal disease, without much general dropsy. With but little general dropsy, and with no disease of the heart, it is out of all experience to have as much dropsical effusion within the chest as in this case. This case may therefore be regarded as an illustration of the occurrence of chronic affection of the kidney following acute tubal nephritis, and also an illustration of double pleurisy produced by renal disease. Her pleurisy has been treated by the application of dry cups to the chest; she has had, in addition, ten grains of quinine once a day, and pills of iron, aloes, and strychnia.

The second case gives us the following history:

Mrs.——, æt. 33, English, and admitted to the hospital September 22d. Family history good. Patient was healthy until one year ago, when she began to suffer from attacks of dyspnœa without cough, which were probably asthmatic in character. Vomiting and œdema of lower extremities first occurred about six months ago. During the past two weeks she has suffered from some pain in the back, and her urine has been scanty and high-colored. The vision has always been good. Upon admission the patient presented an anæmic ap-

pearance, the breath was short, and the appetite poor. Examination of the urine gave s. g. 1010, albumen and casts. Physical examination of chest negative.

Sept. 26th.—Under the influence of diuretics and tincture of iron the patient's urine became more abundant, but giving same results by chemical and microscopical examinations.

Oct. 28th.—The patient does not pass much urine; complains of pain in her back and shortness of breath.

Upon physical examination of the chest, the area of cardiac dulness is found to be very much increased, and with this there is a murmur with the first sound of the heart at the base. This patient now has pericarditis, with considerable effusion of serous fluid into the pericardial sac. There is considerable œdema of the lower extremities, and also considerable fluid in the abdominal cavity. Her face does not show any dropsy, and there is but slight indication of its diffusion by making pressure over the sternum. The question may arise here, is this a case of pericarditis, the inflammation giving rise to the effusion into the pericardial sac; or is it a case of hydrops-pericardium due to the chronic renal affection? There is a slight, but a sufficiently distinct friction murmur occasionally heard, and this sign, be it ever so slight, indicates pericarditis, with a single exception. Sometimes, when there is a pleurisy of the left side, the action of the heart causes the exterior of the pericardial sac to rub against the pleural surface, causing a friction murmur with the cardiac rhythm, and this is called a cardiac pleural friction murmur. If the murmur were of this kind, it should be heard at the left lateral portion of the pericardium. But the friction murmur is more to the right, nearer to the base; it is superficial in character, being a slight grazing sound.

Taking into account the existence of pericardial effusion, there can be no doubt that the murmur denotes pericarditis. Pleurisy can be excluded because an abrupt line of dulness denotes the boundaries of the distended pericardial sac, good resonance on percussion being found everywhere without these boundaries. A simple enlargement of the heart would not produce the dulness which is here found to extend above the base of the organ. The increased space of dulness in cardiac hypertrophy is downwards and to the left. This patient is not suffering much pain, nor is pain a constant symptom of pericarditis. Pain in this disease is sometimes extreme, and sometimes almost entirely wanting. We have, then, in this case another example of serous inflammation developed in the course of chronic renal disease, belonging among the grave secondary affections.

As regards the measures of treatment addressed to the pericarditis, in this case some soothing applications should be made to the præcordia; a light poultice, or the water dressing covered with oiled muslin, and an abundance of flannel. If the kidneys are found to respond to diuretics, these are indicated for a twofold purpose, as follows: to eliminate urea, and to promote the absorption of the liquid in the pericardial sac. Rigid quietude is to be enforced. There is danger of sudden death by syncope on exertion in cases of pericardial effusion. The condition of the patient will not admit of the employment of the active hydragogues with a view to the absorption of the effused liquid; but if the kidneys do not respond to diuretics, saline cathartics, or perhaps the pulvis purgans, may be advisable. The patient should be well nourished. Digitalis will be likely to be useful by increasing the power of the heart's action.

The third case illustrates a condition associated with, but probably not dependent upon, the renal disease.

The patient's name is Miss C——, æt. 22. She was admitted to the hospital on the 2d day of September. Family history good. Since last May she has had more or less œdema of the lower extremities. The dropsy extended up the limbs, appeared on the face, and then about the body. She has had occasional nausea and diarrhœa. Exercise gives rise to palpitation of the heart and want of breath. This patient has a pallid countenance, but this is not as marked as when first admitted. Examination of the urine at the time of admission gave a low specific gravity, with albumen and granular and epithelial casts; subsequently, hyaline casts were found.

September 5th, hydro-peritoneum made its appearance, which has continued and somewhat increased up to this date, Oct. 30th; and at the present time there is, as you see, considerable œdema of the lower extremities. No œdema of the face. The question arises in this case, is this hydro-peritoneum due entirely to the renal disease, or in part to some other cause? Although we have evidences of renal disease, I am quite sure that there is some other affection to account for the hydro-peritoneum. The hydro-peritoneum in renal disease sustains a relation to the dropsy in other parts of the body. But the general dropsy in this case is not an important feature, and this leads us to conclude that the hydro-peritoneum is due to some other disease than the renal disease. It is probably due to disease of the liver—but the expiration of my hour prevents further consideration of the case.

Original Communications.

ON THE TREATMENT OF SOME OBSTINATE FORMS OF EPILEPSY.

By ALLAN McLANE HAMILTON, M.D.,
NEW YORK.

The want of permanence in the cure of those cases of epilepsy (by the bromides especially) when there is a relapse, after the patient and physician have congratulated themselves upon the mastery of the disease, is, I am convinced, due to an insufficient use of these drugs. Even when a careful remedial course is pursued, there are many conditions which will delay, or entirely thwart, the cure of epilepsy, and these are:

1. Strong hereditary taint.
2. Unusual violence of seizure.
3. Long periodical intervals.
4. Idiopathic origin of the disease.
5. The existence of intercranial pressure.

Russel Reynolds* suggests other unfavorable conditions, viz.: A long duration of the disease, and mental failure.

The pathological condition of the brain and its appendages in old cases, may be such as to make the cure impossible, or almost so. Van der Kolk† examined the medullæ of fourteen patients who had died while suffering with epilepsy, and discovered that in cases of long standing, an induration of the medulla caused an exudation of albuminous matter from the impaired walls of this organ. An excessive vascularity permits an extraordinary blood-supply; these vessels are so repeatedly congested during the paroxysm, that their walls become degenerated, and as the disease advances they become too greatly weakened to resist the force of the circulation. In cases of still longer

* A System of Medicine, Vol. II., p. 321.
† Transactions of Sydenham Society, 1859, p. 211.

standing, Foville and Van der Kolk both found fatty degeneration. In these old cases there was an increased vascularity in the fourth ventricle, penetrating into the medulla, to considerable depth. Of course these are conditions calculated to be out of reach of the most energetic treatment.

I think it has been the general opinion of writers upon this subject, that there is a greatly heightened reflex excitability of the medulla; that these nerves supplying the muscles of the neck and the organs of respiration, receive and transmit exaggerated impressions; that the irritation of the vagi and other nerves coming from the upper part of the cord will produce epilepsy in many conditions, and, as Marshall Hall demonstrated, the spinal accessory, which takes its origin from this part of the cord, and presides over the muscles of the neck, will so influence them as to produce a contraction, thereby constricting the blood-vessels, producing the loss of consciousness, which is an important element of the epileptic attack. When their influence is remitted, there is return of consciousness due to suspension of pressure.

A consideration of these facts enables us to understand that an abnormal reflex activity of the medulla must be the important indication to meet and overcome in our treatment; that a tendency of the vessels of the medulla to become engorged, is also a feature of the disease to be noticed. In the treatment of a case we should not lose sight of the fact that there may be a remote cause; and of course if this cannot be done away with, there is very little use of expecting good results from the administration of remedies calculated to work local changes.

But my purpose was to discuss the management of those hopeless cases that the practitioner meets at the dispensaries, or who come to him after years of suffering, and after running the gauntlet of drugs, from cotyledon umbilicus to nitrate of silver. Some of them may have been taking the bromides, or equally efficacious remedies, in an irregular way without benefit, and have given up, disgusted and despondent. One person, on coming for treatment, informed me that he had taken "pounds upon pounds." These are certainly disagreeable patients to treat.

So large is the list of remedies that have been, and now are, used in epilepsy, that the medical man is bewildered by the array of medicines which have been recommended by different text-books. They have been proved, most of them, of little worth, with the exception of two or three. Musk, castor, and valerian, the drugs of the last half century, are now seldom used. Conium and hyoscyamus have been used by some practitioners, but the bromides and two or three others have been so successful that they are now generally adopted. My experience has taught me to rely upon a few good remedies. The objection to some of the narcotics is their tendency to ultimately excite reflex activity; and however carefully these may be given by the stomach or skin, a condition will remain, after their first effects have passed away, which will be conducive to a violent renewal of the attacks; and oftentimes when drugs have been followed by apparent relief, the recurrence of several severe seizures of epilepsy, after slight decrease of the dose, will occur almost immediately, denoting a reaction after a condition of exalted reflex excitability.

The only hope of cure can be derived from the knowledge that a permanent change of the condition of the medulla takes place before its vascular tone is so lowered as to permit exudation—or even a disposition to abnormally receive reflex impressions.

Counter-irritation, either by the actual cautery or sometimes by the seton in cases of long standing, may produce alteration. If we see the case early, we may keep the cerebral vessels in a state to withstand the continual injurious impression of the seizures, which will inevitably entirely destroy the integrity of the medulla. Ergot and belladonna are the best agents I know of as local alteratives, while quinine and cod-liver oil will help the general condition. I propose to dwell briefly upon three drugs which I am convinced give the best results, and these are: the bromides of sodium and potassium, belladonna, and ergot.

Before their administration, however, we must inquire as regards the condition of the patient, his age, duration of sickness, and the existence of a proximate or remote cause; and we should discover whether the attacks be diurnal or nocturnal. Upon these facts depends the selection of medicine; for instance, the bromides are almost useless in nocturnal epilepsy, and they often aggravate the symptoms, but are invaluable when the attacks come on in the day-time.* The bromides produce slower effects in those cases of long standing than they do in recent ones. In cases where *le petit mal* is the feature, belladonna and ergot are particularly indicated, and not the bromide, which increases the severity and number of the seizures.

The bromides, according to Clarke and Amory,† produce a contraction of the arterioles of the medulla, and this contraction must be permanent to prevent a recurrence of the paroxysm. Dr. Russel Reynolds says that a considerable amount of these salts should be present in the system, and that is not obtained by the mere administration of small repeated doses. This statement substantiates my assertion, that in my experience those patients who took heroic doses were cured the soonest. Clarke and Amory, whom I have before referred to, discountenance the toxic administration of the bromides; but I believe that a state closely bordering on bromism is to be reached before we can expect permanency of cure. We must stop here, however, and employ the greatest caution in their subsequent use. Staggering, anæsthesia of the fauces, and mental cloudiness are to be reached; after these come a train of deplorable symptoms which it is almost impossible to stop. The skin will be characterized by a waxy hue; œdema of the limbs and loose tissue beneath the lower eyelids; utter loss of appetite (not always constant), and a mental state of imbecility will ensue. The patient will fall into a low state of exhaustion, attended by delirium, irritable pulse, coldness of skin, followed by a sudden rise of temperature, and finally death.

The sequelæ of this secondary stage of bromism, if death does not follow, will be dementia, and a loss of power and energy that will continue for years.

In the cases I have treated, I have usually begun with 20 grains of the bromide of sodium thrice daily, for smaller doses are ineffacious. At the end of a week, if there is no change for the better or worse, the dose may be increased by 10 grains, and so on till we give 160 grains in the course of the day. It is then necessary to watch carefully for the appearance of symptoms which will indicate the toxic effects of the drug. The patient may be seized with an irresistible desire to sleep at all times. He may fall asleep over the table, or may appear absent-minded. If spoken to, his mind will sometimes be "wool-gathering," and he will not heed the first summons, but regain himself suddenly to pay attention, which is an effort. As other

* Dr. Duckworth Williams, *London Lancet*, May 20, 1857.

† Clarke and Amory, The Bromides of Potassium and Sodium. Boston, 1873.

symptoms increase, he will display an irritability of temper, an indisposition to go out into the open air, a staggering gait combined with a bending of the knees, and consequent sinking of the body. His face will wear a blank, expressionless appearance, and the color of his skin will appear a dirty white. His breath becomes foul with the odor of bromine, and his pharynx devoid of sensibility. An eruption of acne may be present on the forehead and chin.

As we advance into the second stage we find that a number of alarming symptoms will develop themselves in succession. The process of waste goes on with excessive rapidity; a loose cough and an œdematous condition of the lung-tissue will ensue; in fact, there may be anasarca of the entire body when the patient is bromized to this extent. As the stomach has been a sufferer for a long time, it is reasonable to expect a change in this organ. The secretion of gastric juice is interfered with, and it is often extremely difficult to find an article of diet that will be digested. The patient's pulse becomes weak and intermitting, large dark circles surround the eyes, followed by total mental aberration, and then come the signs of dissolution alluded to before. The symptoms towards the close of life may resemble those of typhoid. Clarke and Amory give two very graphic cases of bromism, one of which was fatal.

After reading this brief list of symptoms, we have certainly cause to avoid its excessive use; but if care is used the patient may be kept hovering on the borders of bromism without going further. Certain adjuvants in the treatment will stave off the severe effects of the bromides, and when bromism is produced will quickly restore the patient. The various preparations of cinchona and iron, combined perhaps with cod-liver oil or strychnia in small doses, will do almost immediate good. A temporary suspension of the remedy will diminish the violence of the symptoms.

It has been suggested that the combination of strychnine with the bromides is efficacious; but the effect of this alkaloid, in the cases I have seen and treated, has been to aggravate the disease. In *very* small doses, with iron and quinine, it may have some efficacy.

Belladonna, given by the stomach with the bromides, has also been tried; but the properties of atropia are apt to be neutralized by the alkaline bases of these salts, particularly calcium.

Perhaps my remarks upon the use of the bromides would be of more interest should I illustrate them by a recent successful case.

—— ——, aged fifteen years, with history of decided nervous hereditary taint, maternal grandmother and other relations having been the victims of nervous diseases of a more or less grave character. The patient's sister had died several years before of a disease which was undoubtedly cerebral sclerosis of the left side, though no very accurate statement could be obtained.

The patient himself is of marked nervous-bilious temperament, large framed, with dark dry skin, hair, and eyes, and a restless bearing. He shows a large surface of the sclerotic coat, which is of a blue-white. His lips are full, the lower one particularly, and there is occasionally an expressionless appearance of the face. Dr. Brown-Séquard and other distinguished specialists had given a hopeless prognosis for the case, and it was with very little assurance of success that I began treatment. His previous history was as follows: From the time of his early infancy he had repeated epileptic convulsions. These did not seem aggravated by any particular external circumstances, but would occur in the course of a day, and perhaps he would pass a long interval without them of several days, or again they would come every day for some weeks. His family described these seizures as a species of trance, the eyeballs being rolled upwards, and a tetanic contraction of the muscles occurring at the same time, which would cease in a few seconds.

It was not till about two years ago that he had any attacks of "*le grand mal*," and these were violent and of long duration, occurring generally at night or in the early morning. He would then fall, gnashing his teeth and exhibiting all the ordinary symptoms of *epilepsia gravior*. These attacks became more frequent and violent, quickly succeeding each other. They would come usually after intervals of three weeks, and he has had as many as seventeen at a time—the attacks occurring usually within a period of two days. There would be excessive pallor, general languor, and great exhaustion after the attacks. He would apparently recuperate and be in a convalescent state when the next attack would take place. During these years, seizures of "*le petit mal*" would come and go, and there would be from six to thirty a day. At these times his features would suddenly lose their expression, his dull leaden eyes would roll up, and breathing would be apparently suspended. In from a few seconds to several minutes he would recover, with no remembrance of his seizure. At the table these attacks would occasionally come on, when he would drop his knife or whatever happened to be in his hands. His mental condition had changed very slightly, his memory was good, he was unusually bright and witty, was fond of amusements where thought and ingenuity were concerned. His sensitiveness was great, and I was obliged to use the greatest caution in questioning him for fear of hurting his feelings. I first saw him on the third of January, 1873. He had had several convulsions of the severer variety three days before, and was apparently weak and miserable. After taking his history (and perhaps it would be well to mention here that there was no exciting cause for the disease), I put him upon the bromide of sodium in doses of 20 grains, with $\frac{1}{10}$th of a grain of strychnia thrice daily. On the same day he had three convulsions of a very severe character. I immediately stopped the strychnia. An entire change of diet was instituted, and he took about a quart of strong beef *consommé* daily, besides milk and dry rolls, made without "saleratus" or other culinary abominations. His last meal was taken at 5 P.M., and this was extremely light. Confectionery and pastry were of course tabooed. An attendant was procured, and walks in the fresh air were ordered. These regular habits, with a moderate amount of mental work, produced a change for the better. The next expected time for his instalment of "fits" would arrive in about three weeks, and as the bromide had not given rise to any unfavorable change, the dose was first increased to 140 grains daily. After a week from this change (Jan. 21, 1873), I was enabled to detect the peculiar odor of the breath. He was slightly drowsy, and his step was uncertain. Caswell, Hazard & Co.'s preparation of the pyrophosphate of iron was then given, and in less than two days he was as bright as ever, but with no change in the breath. I might mention that his appetite had been voracious from the first, and it was hard to keep him from eating his food with inordinate haste. The time for the expected seizures came and went without their occurrence, the dose of bromide being kept up with the idea of stopping the attacks of *petit mal*; but no effect was produced upon them, except it might be to increase them. I finally gave 160 grains a day, as I thought I detected premonitory symptoms of a severe

seizure. I gave half-ounce doses of cod-liver oil with the elixir of the pyrophosphate of iron, which evidently agreed with the patient. At this time symptoms of bromism developed themselves to such an alarming extent that the dose was decreased to 60 grains per day, when the patient rallied completely, with no convulsions as yet. This condition of bromism alluded to consisted of severe headache, loss of appetite, irritability of temper, weakness of the knees, with soreness of the throat, hesitating speech, incontinence of urine, general mental obscurity; but there was no eruption. Feeling that the bromide was powerless to stop the seizure of *petit mal*, which had not been greatly benefited since he came under my charge, I injected $\frac{1}{100}$th of a grain of sulphate of atropia beneath the skin of the mucha. Very few of the physiological effects of this drug were visible; but when the dose was increased to $\frac{1}{75}$ th of a grain, his pupils were dilated and there was marked dryness of the throat. The bromide was kept up to 120 grains at this time. After several hypodermic injections of sulph. of atropia had been given daily, the attacks of *petit mal* were reduced to two or three a day, and finally ceased. At the beginning of March, two months from the time he came under my notice, he was permitted to leave town, but still under surveillance, and the bromide continued with the tonics and cod-liver oil.

He had not had a convulsion since the 3d of January, and for some weeks had had very few attacks of the lesser disorder. He had undergone the ordeal of sitting for his photograph and having his hair cut, without the least spasm. He was mentally bright and very well. On the 12th of March, from some cause or other, he had two of the seizures of "*le grand mal*." I have since ascribed them to a day of exposure spent in coasting down hill, and great consequent muscular fatigue.

The dose was again increased to 160 grains from 120. I left him in a semi-stupid state.

March 17th.—Patient has been in a drowsy state; has had a few attacks of *le petit mal* since last date, very little appetite, slight cough; after a light dinner went to sleep.

March 20th.—Impossible to get patient to lie comfortably; head felt heavy; all medicines discontinued. Has been in bed all day, waking occasionally to say a few incoherent words; eats more. Patient staggers greatly when he arises. It is difficult for him to hold anything for fear of letting it drop. Belladonna internally.

March 26th.—Great improvement, mental and physical; cough abated, appetite good; lesser attacks abated.

March 31st.—Has steadily improved. Patient still irritable and "nervous," disliking the sound of the piano. Twenty grains of bromide thrice daily; a glass of wine also prescribed three times a day. As it is impossible to regularly give him hypodermic injections, Bonjean's capsules of ergotine were given; each capsule contains five grains. The fourth dose reduced the attacks of *petit mal* to one or two trifling seizures daily.

July 1st.—The patient has had but one grave seizure in some months.

Sept. 12th.—Patient has had no more attacks of "*le grand mal*." Occasional facial spasms are all that remain of disease.

Belladonna.—The great advantage of this drug where it is desirable to diminish the hyperæmia of certain organs, particularly those of the nervous system, makes it of particular benefit in epilepsy. Trousseau has given belladonna extensively, and with great success, curing twenty of one hundred and fifty patients to whom it was administered. Drebreyne cured two hundred cases. We are not told by the author what forms are most benefited. Other writers contend that only recent cases are at all relieved. My experience has led me to believe that the variety of epileptic seizures occurring in the day-time were most readily abated by this form of treatment. Large doses of belladonna greatly lessened the form of attack known as *le petit mal*. Belladonna, as we know, diminishes the amount of blood in the vessels of the cord, and establishes a condition antagonistic to spasm of these vessels. Trousseau's method of giving belladonna, which I have taken from Ringer,* is this: "During the first month of treatment the patient takes a pill composed of ext. of belladonna and the powdered leaves of belladonna, of each one-fifth part of a grain, every day, if his attacks occur chiefly in the day-time, or in the evening, if they are nocturnal. One pill added to the dose every month; and whatever be the dose, it is always taken at the same period of the day. By this means the patient may reach the dose of from five to twenty pills, and even more."

As yet I have not heard of the administration of belladonna and its alkaloid by the hypodermic method, locally. In several cases I made this the sole treatment, and though it was tried somewhat empirically, I had the gratification of witnessing most important results. From one-hundredth, increased to one forty-eighth of a grain of the sulphate of atropia solution, were injected beneath the skin at the base of the skull, for several weeks, with intervals of one or more days between each application. The want of sensibility of this part of the skin made the pain inconsiderable, and the patient scarcely minded the operation, repeated even as often as it was. The effect seemed to be more immediate than when belladonna was given by the mouth. The results were gratifying, inasmuch as one case of ten years' standing was improved notably after three weeks; and another case, when this treatment was combined with the bromide, was cured.

Harley† has found belladonna serviceable in curing epilepsy due to emotional causes.

Ergot.—In the spring of 1873 I had occasion to try ergotine for a case of epilepsy, since which time a most excellent article by Dr. Kitchen,‡ of the Utica Asylum, has appeared, giving his success with this agent in various nervous disorders. He has used the preparations of Squibb and Merck, as well as the fluid extract of ergot.

My experiments have been made with the ergotine of Bonjean of Paris, and propylamin, which is identical with secaline, the active principle of ergot. Though my observations were not as extensive as those of Dr. Kitchen, I have several cases under my care which have notably improved under the ergotine treatment. Those cases the most benefited were of the variety known as *le petit mal*. In one case coming to my notice, I found that the patient, who had been having fifteen or twenty slight convulsions, was relieved greatly after a week; that two was the average number of daily attacks, and these finally disappeared. One of Bonjean's capsules, containing about 6 grains, given three times daily, is enough to begin with. The fluid extract produced less satisfactory results. Propylamin has been tried in one case in doses of ℥v. suspended in mucilage. Though this

* Ringer's Handbook of Therapeutics.
† "Old Vegetable Neurotics," Harley.
‡ Am. Journal of Insanity, July, 1873, p. 83.

case is unusually severe and has been under all kinds of treatment, a great diminution in the number of attacks is evident.

The influence of ergot on the muscular coat of the blood-vessels of the cord is to contract them, and restore their tone through the vaso-motor nerves. Its action is much the same as that of belladonna, though in a far more energetic degree. Ergot notably diminishes exaggerated reflex power, and is therefore clearly indicated in epilepsy. It will combine well with the bromides, and the therapeutical effects of both will be increased, as Dr. Kitchen has also shown. Dr. Kitchen's cases number five, and in every one a cure has been effected; three of them were treated with the fluid extract, and two with ergotine. I have been successful in stopping the convulsions in three cases, but as sufficient time has not elapsed since the commencement of treatment, it is impossible to say whether a permanent cure has been established. I hope that others will try propylamin and give their results to the profession.

In spite of the medicines given, the physician will sometimes find that his patient does not recover, and perhaps he will give the case up, feeling that nothing can be done. We should always look for a deeper evil in these cases, for a hidden cause may exist in very many instances, which when removed, there may be a rapid cure. One case of this kind has come under my charge in the last few weeks. The patient, a young girl, had been treated ineffectually for over a year, and still the attacks, though of a mild form, occurred as frequently as ever. A rigid series of questions brought out the fact that some uterine trouble existed, and an examination by a prominent gynæcologist resulted in the discovery of an anteverted uterus and serious concomitant conditions; under the proper local treatment, she is recovering with very little difficulty.

Uterine and ovarian derangements are a very common cause of the disorder.* Barnes says the irritation is transmitted very slowly from the sentient nerves of the cervix to the cord, and more slowly to the brain, and consequently grave nervous disorders occur usually in old cases, and take a violent form. "Continuous hyperæmia of the genitalia implicates the general nervous system. It is rare for epileptic paroxysms to be superinduced unless they occur at or near the first menstrual periods, it being necessary for the production of so deep a perversion of the nervous power, that congestion of the internal genitalia should occur suddenly, and before these organs are developed by and habituated to the physiological fulness of their vessels." The prospect of cure depends upon the return of function through disappearance of the cause, and consequent return of tone of the cerebro-spinal system. Wright† states that when the convulsions occur in women, they are most apt to take place at the time of menstruation, and with the periods of uterine changes. I have found this to be the case in several instances, the menstrual periods being those when the patient was most often seized. Even if the severe convulsions were omitted, attacks of *petit mal* supplanted them. The hope of benefit in these cases depends upon the time of life, and the proximity to the commencement of menstruation. It is much easier to cure a young patient than one in whom the disease has become deep-seated. Any prolonged irritation of the pudic nerve is apt, whether in the male or female, to be followed by epilepsy, and such causes of irritation it is well to discover. Barnes gives cases, on page 375, where congestion of uterus and vagina existed, with epilepsy and finally dementia.

Besides these causes, we will be able to find that injuries of the head, ascarides, and renal and biliary calculi may also be frequent causes of the trouble. A form of epilepsy which gives the physician much annoyance, is that depending upon or caused by disturbances of the digestive apparatus, and this occurs in persons having a nervous diathesis. The important part which the stomach plays in epilepsy may be studied when we watch the disagreeable results which follow an abuse of this organ. A heavy meal at night will generally produce a series of epileptic attacks which are always severe. Gastric epilepsy is usually nocturnal. In a lecture delivered by Dr. G. E. Paget at Addenbrooke Hospital, Cambridge,* eight cases of this kind were mentioned, and in all the convulsions were nocturnal; six of the patients were children, and the other two adults; the time of cure averaged two years. All of these cases were treated by bismuth, magnesia, and medicines of this class, and as soon as the condition of the stomach was improved there seemed to follow an amelioration of the disease.

There are other kinds of eccentric irritation which will cause epilepsy, and may escape the attention of the practitioner: a carious tooth, or an injury of the jaw; the presence of some irritating body such as a needle or bullet. These centres of irritation may be internal, and escape the attention or be out of reach of the physician. Dr. Greenhow† reported the case of a girl in whom epilepsy appeared. A splinter of wood was subsequently discovered beneath the thumb-nail; four months after the removal of this the patient was cured.

Those forms of epilepsy which depend upon injuries of the head or intracranial tumors resist all forms of treatment, except it may perhaps be trephining. I have not myself had occasion to use the trephine, and cannot speak in regard to its merits. Echeverria gives three cases where trephining effected a cure. Of the other subjects trephined for secondary nervous disorders, 149 cures are recorded by various authors. Epilepsy due to syphilis is often caused by a tumor in the brain substance; and specific treatment will usually benefit or cure the patient.

110 East 20th Street.

* Barnes, Diseases and Displacements of the Uterus, p. 377.
† Wright, Uterine Disorders, p. 162.

TREATMENT OF UTERINE FLEXIONS

BY THE

INTRA-UTERINE SELF-RETAINING STEM.

By ELY VAN DE WARKER, M.D.,

SYRACUSE, NEW YORK.

In an article in *The New York Medical Journal* for October, 1873, I gave a description, with an illustration, of a new form of self-retaining intra-uterine stem. In order to make that article as brief as possible, I said nothing of the peculiarities of the treatment of uterine flexions with my form of stem. I shall in this article detail those conditions which are essential to the successful wearing of the self-retaining stem. In the first place, it is of course understood that there exists no lurking perimetric or parametric inflammation, either acute or chronic. It is best to make sure of this by a careful examination of the history and present condition of the patient; for it is a

* *London Lancet*, July, 1868. † Quoted by Paget.

matter of common experience how easily a slumbering intra-pelvic peritoneal trouble, or its allied affections, can be roused into troublesome if not dangerous activity by untimely manipulation. The next thing to be considered: Is the womb in such a condition as to bear the persistent presence of a foreign body in its cavity? This is a very important matter. In some conditions of the uterus and of the nervous system, the slightest intrusion of a foreign body into its cavity leads to serious results. I shall never forget my astonishment when a young and strong woman passed into a state of convulsion, with insensibility, the moment a sound, carefully used, passed into the cavity of her womb. From this extreme degree there are all shades of resentment at the introduction of a foreign body into this cavity. Some idea may be formed of the amount of uterine tolerance by the tenderness with which the organ responds to the touch. In a retroflexion, for instance, when the finger comes in contact with the fundus in the retro-vaginal *cul de sac*, a keen sensibility to even slight pressure may be elicited. The introduction of a sound or repositor would also cause great and lingering pain. In such a case the wearing of an intra-uterine stem might lead to severe symptoms. The first of these contra-indicating conditions ought to be carefully treated before the employment of the stem. Another thing to be considered is, whether the fundus in its abnormal position has contracted such adhesions as would render its reposition exceedingly painful or doubtful. In case such a condition is found to exist, it is necessary to understand the theory of this form of stem, in order to appreciate the extent to which the stem would give correction to the error. If the adhesions are firm and unyielding, the mere flexion might be corrected; but this could be done only by throwing the neck forward above the pubes, while the fundus, yielding nothing to the presence of the stem, would cause the womb to occupy a position at about right angles to the axis of the vagina. It is evident at once that this or any other form of stem could not be borne. This follows from the fact that the self-retaining stem will correct a flexion, but is powerless to restore a version. I said in *The New York Medical Journal* article, that the existence of a version is not incompatible with the cure of a flexion. While this is true to a degree, I am not prepared to announce it so unequivocally here. The use of this stem in a case in which the organ persists in its retroversed position, will often develop pain in defecation, and a bearing down, with extreme backache, not present in so extreme a degree previous to the correction of the flexion. Whatever version there may be present then, if it requires any treatment at all, must be treated independently of the presence of the stem, in the manner I shall describe. A retroflexion corrected by the stem is almost sure, if the womb is a small one, to result in a retroversion. This results, I believe, from a weakening of the forces which sustain the uterus in a normal position, owing to the long-depressed state of the fundus.

So far as the uterine supports are implicated, a flexion is an intensified form of version; the sustaining forces of the fundus being more involved in the former than the latter state of dislocation. It is possible also that partial adhesions may exert more or less restraint to the organ assuming the erect position. This tendency is, however, no bar to the successful use of the self-retaining stem, as its correction is a simple matter.

The condition of the uterine surroundings not contra-indicating the treatment of the flexion, it ought to be ascertained how well disposed the cavity of the womb is to the intrusion of a foreign body. If the cavity of the womb is very sensitive to the presence of a sound, or if its introduction is followed by long continued or severe pain, and possibly by some blood, we have most likely a chronic endometritis to contend with. So far as this state of extreme tenderness is concerned it ought to be remedied before the employment of the stem. To cure the endometritis, under the most favorable circumstances, involves too much time and uncertainty to delay the treatment of the flexion on this account. The sole purpose of the preliminary treatment is to remove that degree of sensibility which renders the wearing of the stem painful or inconvenient.

There are two ways of doing this. The first is by frequently passing a sound and leaving it in position for ten minutes or half an hour, and repeating this from day to day until the sensibility of the diseased membrane is changed. This sometimes takes more time than either the patient or physician has to give to it. A quicker and, I think, better way, is to treat the inordinate sensibility of the endometrium by the free use of the intra-uterine caustic instrument. The cavity of the womb is to be freely touched in every part with the nitrate of silver, by moving the instrument back and forth and slightly turning its point. This is sometimes followed by acute pain, which I think is better treated by a medicated pessary charged with morphia and coneia—gr. ss. vel gr. i. morph., et gr. i. vel gr. ii. coneia—than by morphia either by the mouth or hypodermically.

This treatment may need to be repeated three or four times, at the necessary intervals, before the acute sensibility of the cavity is removed. But those are extreme cases which require any treatment so heroic as that named above. In the majority of cases it is usually sufficient to train the womb by passing the sound and twirling it forward or backward as the flexion may require, as much for the purpose of keeping the organ straight for the introduction of the stem, as for testing the degree of sensibility. So far as tenderness of the body upon pressure is concerned, I have yet to see the flexed uterus in which slight pain to the touch has not been present. In the majority of cases I think this sensitiveness to pressure is more physiological than inflammatory, due to a partially constricted state of the pendent fundus. This idea is corroborated by the facts that this tenderness often disappears upon wearing the stem; and that it is circumscribed, as is proved by passing a sound with the proper curve; and pressing the uterine wall directly involved in the flexion back upon the sound, considerable tenderness will be developed; but by pushing the sound against the opposite wall, the tenderness is much less marked.

The introduction of the stem is a simple matter. It is necessary to straighten the organ in the manner mentioned above. No judicious amount of force will insert the stem into a uterus acutely flexed without this preliminary repositing to about the normal axis. Ten to fifteen minutes are usually sufficient to keep the sound in position; on its withdrawal, the organ will retain its place long enough to allow the insertion of the stem. In case the uterus returns to its flexed position

directly on the removal of the sound, the posterior vaginal *cul de sac* may be tamped with cotton-wool with the sound in position, which, on the removal of the sound, retains the organ in position and the stem glides in easily. No speculum is necessary either in the preliminary use of the sound or in the insertion of the stem. The stem placed upon a wire is used in the same manner as the sound. The finger, after the stem is well in position, is placed against the small button projecting from the external os to prevent the withdrawal of the stem while the wire is being removed.

The patient should be kept under observation for three or four days before being sent home—if she resides at a distance—in order to observe the tendency to version, and how well the stem is borne. In some cases the stem will slip partly out after being worn for a day or so. This results from either the cross-section of rubber tubing being too short, or the perforation for the tubing being too near the uterine end of the stem. In either case it is easily corrected. A longer piece of tubing may be passed, or the cross-section passed through a new perforation nearer the internal os. In future, I shall direct the maker to make two perforations for the cross-section, so that its position can be changed. If version should exist to a degree requiring correction, the posterior vaginal *cul de sac*, in a case of retroflexion, may be filled with a pessary of carbolized cotton-wool in sufficient amount to support the womb at the proper angle. This is the best material I have yet found for this purpose. I have removed such a cotton pessary after being in position ten days, and have found it free from any offensive odor. The pessary ought to be changed once a week. The stem, well in position and well borne, should remain in for from two to three months. I have not found that its presence produced any noticeable change in either the symptoms or character of the menstruation.

To inform those who have not seen the description of my stem already published, it may be well to give a few words in description. It consists of a hard rubber stem, two and a half or two and three-quarter inches long, slender and slightly bulbed at the extremity; the portion projecting from the external os is in the form of a small button with rounded edges; at this end a small hole is drilled for the wire by means of which it is introduced. The self-retaining portion is very simple. It consists of a cross-section piece of French rubber tubing, one-sixteenth inch calibre, and three-eighths of an inch long, passed through a perforation in the shaft of the stem half or three-quarters of an inch from the bulbed extremity. The purpose of this cross-piece of tubing is, that after being pressed down by the side of the stem, in passing through the canal of the neck, it will expand in the cavity of the uterus at right angles to the stem, and thus retain it in position. In ordering, the physician should designate the length of the stem after careful measurements.

Dr. John P. Adams, dentist, 70 South Salina street, Syracuse, has kindly consented to vulcanize a few of these stems, so that those who wish to test the value of the invention can procure the instrument through him.

To the gynæcologist many of the details presented in this paper are not necessary for the intelligent use of the stem; but to the general practitioner, who may not be so familiar with the manipulations in this department of medicine, an attention to these details will save much annoyance in case of employing this instrument.

Dr. Peter Van Buren, of New York, died Dec. 7, 1873, aged 71.

Reports of Hospitals.

BELLEVUE HOSPITAL.

Notes of Practice and Peculiarities in Treatment.

ASCITES.

A case was noticed in which this symptom was developed in a very marked degree. The man was 50 years of age, and had but little in his history to account for his present condition.

The dropsical accumulation was so extensive that the case presented some features of interest relative to arriving at a correct diagnosis. He had been in the habit of taking brandy "straight," and upon an empty stomach. That might be suggestive of cirrhosis of the liver as being the cause of the ascites; but the accumulation of fluid was so great that the suggestion could not be confirmed by physical examination.

There was, however, enlargement of the veins running over the abdomen, which almost absolutely proved that there was portal obstruction if the flow of blood in them is upwards.

The flow in this case was from below upwards.

Auscultatory percussion is the most satisfactory method of marking out the size of the organs in the abdominal cavity under such circumstances.

In this case there was some œdema of the lower extremities, which might be due to different causes: First, Bright's disease; second, the general cachexia incident to cirrhosis or contraction in the liver, causing pressure upon the vena cava.

In treating such a condition, the kidneys are almost always first addressed. When such extensive accumulations of fluid exist in the abdominal cavity, these organs are also usually oppressed; but it does occasionally happen that diuretics will carry off the fluid. The success of diuretic treatment is exceptional.

If cathartics are employed, the salines are regarded more favorably than the drastics, on account of the exhaustion of strength which the latter are liable to produce.

A valuable prescription, and one which can be repeated for a long time without producing any special exhaustion, is the following:—

℞ Magnesiæ sulph. . . . . ℥ i.
Fld. ext. sennæ. . . . . ʒ i.
M.

This may be repeated every other day. Two conditions of the liver may give rise to the ascites—cirrhosis and peri-hepatitis. In either case the principle is the same, viz., obstruction to portal circulation.

Paracentesis is to be resorted to when the patient suffers imminently from the amount of accumulation. All agree upon this point. Opinions differ, however, with regard to the propriety of performing the operation early. The greater majority of observers adhere to the opinion that it is better to defer paracentesis until all other measures for removal of the fluid have been employed without effect, unless the sufferings of the patient demand immediate tapping. Upon the other hand, there are eminent observers who express the positive opinion that early tapping is the most rational method for removing the fluid. The reason for the hope that is within them is—

First.—Diuretics very generally fail.

Second.—Cathartics less generally fail, but the beneficial effects derived from their administration does not balance their perturbatory effects upon the general system.

Third.—Diaphoretics are but seldom employed, and when employed, very generally fail.

Fourth.—Removal of the fluid relieves the abdominal viscera from pressure, and affords opportunity for the administration of tonic remedies and proper alimentation.

Fifth.—The objection urged that one effusion after another will occur, necessitating a repetition of the operation, consequently exhausting the patient, is not sustained by practical experience. The fluid will return, it is true; but that the patient is worse for that reason, is not believed by this class of observers, for it can be removed at any time when it becomes distressing. Such are some of the arguments in favor of early tapping.

FACIAL PARALYSIS.

An interesting illustration of this common malady was noticed in a man above 45 years of age. No cause could be found for the occurrence of the lesion. The man awoke in the morning and found his face distorted. Upon close examination it was found that there was loss of smell upon the same side of the nose with the paralysis, and also loss of taste upon one half of the tongue upon the same side, thus enabling his medical attendants to arrive at quite definite conclusions with regard to the seat of the lesion.

There was some tenderness over the mastoid region, along the course of the nerve. Iodide of potassium, leeches, and electricity form the main features of treatment. In some of these cases the constant current will act, and the primary current will not; but in this case the constant current would not act, but the primary current would.

COMA AND CONVULSIONS.

Special reference is made to a case of coma and convulsions, in connection with lead-paralysis, and thought to be dependent upon the same cause of the paralysis. A critical and careful examination of the urine furnished no evidence of renal disease. It occasionally happens that renal symptoms are developed in connection with lead-paralysis dependent upon intercurrent renal disease developed by the lead-poisoning. In this case, however, there was no such evidence obtained.

Progress of Medical Science.

THE ECHISES SCHOLARIS AND THE GARCINIA MANGOSTANA.—These two new remedies were presented at the late International Exposition in Vienna. The bark of the first tree is considered a specific remedy against all kinds of fevers. Mr. Gruppe, of Manilla, has extracted from it a bitter active principle called ditaina, which he considers better than the sulphate of quinine, and much cheaper. From the fruit of the second the same chemist has extracted a fluid called Anti-dysenteric Extract of Garcinia Mangostana. This extract has proved a very valuable remedy in dysentery, chronic diarrhœa, catarrhal affections of the uterus and bladder, and in all affections where astringents are indicated.—*Sperimentale*, Sept., 1873.

THE TEMPERATURE OF THE SEXES: AN INDICATION OF DEVELOPMENT.—Under this caption Dr. J. Stockton Hough has published a very valuable paper, showing the most extensive researches in biology. He tabulates his conclusions as follows:—

1. That males have, as a rule, from the beginning to the end of life, a higher temperature and a less frequent pulsation of the heart than females, varying, nevertheless, according to temperament, constitution, age, and condition of health.

2. That children at birth, and for a short time subsequently, have a high temperature which, though slightly lower than that of an adult, nevertheless slowly and gradually declines to a certain point until about the sixth year of age is reached, after which it gradually increases until developmental maturity is reached, when it gradually and slowly declines again as old age (second childhood) advances.

The pulsation of the heart follows just the opposite course, being most frequent when the temperature is lowest, and least frequent when it is highest.

3. That males appear to have a greater variation in temperature than females, thus agreeing with their greater variation in stature and many other peculiarities.

4. From all of which we conclude that the woman approaches more to her condition as a child than the man does, and is consequently less highly developed. —*Phil. Med. Times*, Nov. 8, 1873.

ON THE SURGICAL USE OF GASTRIC JUICE IN THE TREATMENT OF CANCEROUS TUMORS.—Professor Lussana after several years of experiments and observations has arrived at the following conclusions: 1. Gastric juice applied to these tumors softens their tissues, but its action is not powerful enough to arrest the progress of the disease. 2. That natural gastric juice is more reliable than the artificial. 3. It does not destroy the vascular tunics, but arrests local hemorrhage produced by the destruction of tissues. 4. The gastric juice of dogs was found to act slowly; indeed, it did not much retard the development of the tumor. 5. There is a continuous exhaustive loss of substance during treatment, and it is probable that though the cancerous elements are dissolved by this remedy, the further extension of the disease is not prevented.—*Gion. Ven. di Sci. Med.*, Sept., 1873.

PUERPERAL AMAUROSIS: ITS IMPORTANCE AS A SYMPTOM.—Dr. H. W. Williams, of Boston, gives two cases of this form of disease, occurring in his own practice, and adds four that have already been published by Dr. F. Weber, of St. Petersburg. He believes that puerperal amaurosis has some relation with puerperal convulsions, though he does not regard the former as invariably the forerunner of the latter. Indeed, eclampsia occurs far more frequently, and often precedes the blindness. Yet the occurrence of amaurosis during parturition should be regarded as a symptom of grave importance. The presence of albumen, though it frequently occurs, does not seem to have an absolutely determinative influence; it is absent in some cases, and in others may outlive the amaurotic symptoms. Primiparæ are seldom attacked, while the reverse holds true with regard to eclampsia. Fortunately, an attack of the disease at one puerperal period does not involve the probability of its occurrence at any subsequent one.

Dr. Williams does not recommend any special treatment in these cases, though he advises his patients to avoid any unusual fatigue or exertion that may induce cerebral congestion; and if amaurosis occurs, advises great watchfulness on the part of the physician to arrest, if possible, puerperal convulsions.—*Boston Med. and Surg. Jour.*, Oct. 16, 1873.

LUMBAR COLOTOMY.—Dr. Erskine Mason has published a report of six cases in which he has done this operation, and appends a table containing the records of eighty other cases. He believes that in the hands of a

good anatomist and careful operator the difficulties of almost every case will be overcome, and for the majority of cases the operation will be found easy, and, as far as the life of the patient is concerned, safe.

As to the objection which patients will very naturally urge against the artificial opening produced by colotomy, he says that the testimony of very many of those who have been operated on, and the experience of the surgeons who have seen the largest number of cases, is that an artificial anus has comparatively little inconvenience. These patients are not troubled with a continuous discharge of either flatus or fæces, a suitable pad being sufficient to prevent such a condition of things; and they may pursue their vocations and mingle with people without disclosing their ailment. In many cases the bowels have been found to act as regularly, and not more frequently, than when this condition did not exist.—*Am. Jour. of the Med. Sci.*, Oct., 1873.

New Operation for Aneurism.—A novel operation was performed very recently at the Pennsylvania Hospital of Philadelphia, by Dr. R. Levis, and the result, if the case turns out favorably, will be a very decided advance in surgery. The case was one of subclavian aneurism, involving possibly the innominate. As ligation of the artery was deemed inexpedient by the surgeons who examined the case, Dr. Levis determined to carry out a plan of his own, which is a modification of that adopted by Dr. Moore, of the Middlesex Hospital, and since followed by Dr. Donville and Mr. Murray, of England. The plan of these latter gentlemen was to introduce fine wire into aneurisms, to afford a nucleus about which clots could form. Dr. Levis conceived the idea of using horse-hair, believing that it would offer sufficient obstacle to the blood-current to produce coagulation, and also, being animal in its nature, would act like the catgut ligature and not give rise to suppuration. The horse-hair was introduced through a fine sharp needle canula, which was plunged into the sac. No difficulty was experienced in its introduction, and twenty-four feet nine inches were safely stowed away in the aneurism. A marked diminution in the force of the pulsation of the aneurism, and of the pulse of the wrist, was at once induced. This has increased since the operation, the tumor has also gained in solidity, the pain has lessened very much, and no unfavorable symptoms have resulted. At last accounts the case was still progressing favorably.—*Phila. Med. Times.*

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RANK OF THE MEDICAL CORPS OF THE UNITED STATES ARMY.

Our readers will recollect that in our report of the last meeting of the American Medical Association there appeared a letter from the medical officers of the army, which set forth, that in the present organization the medical staff was not upon an equal footing with similar corps as regards rank, and that great injustice was done by special legislation preventing promotions or new appointments. It will also be recollected that resolutions were passed expressing the opinion that the rank of the medical staff of our army should be equal to the relative rank held by the same corps in the navy; also that a committee of representative men from different sections of the country was formed to memorialize Congress upon the subject.

The committee in question have performed the labor assigned them, and have made the draft of a bill which must meet with the approval of the medical profession of the country. It is as follows:—

"Section I.—Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, That so much of the sixth section of the act entitled, 'An Act making appropriations for the support of the Army and for other purposes,' approved March 3, 1869, as forbids promotions and appointments in the medical department of the army, be, and the same is hereby, repealed.

"Sec. II.—And be it further enacted, That the organization of the medical department shall be as authorized in the seventeenth section of the act entitled, 'An Act to increase and fix the Military Peace Establishment of the United States, approved July 28, 1866. *Provided*, that from and after the passage of this Act, the Chief Medical Purveyor and four Assistant Medical Purveyors, now authorized by law, shall have the rank, pay, and legal allowances of colonels; and *Provided, further*, that surgeons who have served thirty years and upwards, from the date of their original entry into service, shall have the rank, pay, and legal allowances of colonels, and surgeons who have served less than thirty and more than twenty years, from the date of their original entry into service, shall have the rank, pay, and legal allowances of lieutenant-colonels, and all other surgeons shall have the rank, pay, and legal allowances of majors as now authorized by law, and the rank, pay, and legal allowances of assistant surgeons shall be as now authorized by law. *And Provided, further*, that the foregoing provisions of this Act shall apply to all officers who may hereafter be promoted in the medical department.

"Sec. III.—And be it further enacted, That nothing in this Act shall be construed to permit the appointment or promotion of any person in the medical department until he shall have passed the examination now required by law.

"Sec. IV.—And be it further enacted, That all laws and parts of laws inconsistent with the provisions of this Act be, and the same are hereby, repealed."

Two years ago our brethren of the navy made demands for increase of rank, and after a long fight and by sheer force of argument obtained the passage of the act of March 8, 1871. This act gave the rank of Captain—equivalent to that of Colonel in the army—to fifteen medical officers, and the rank of Commander—equivalent to Lieutenant-Colonel in the army—to fifteen others. Our brethren of the army now ask an equal consideration in their behalf, and as the first step in the direction of justice, have a right to demand that the act of March 3, 1869, prohibiting promotions in the medical staff, be repealed.

As a profession we are more than ordinarily interested in this matter. The medical staff in the army represents us in that branch of the service before our country; and while we pride ourselves upon this representation as being in every respect what it should be, we are mortified to learn that their modest claims for ordinary recognition for meritorious services, of relative rank with other staff corps, is so shamefully, so unnecessarily, so unjustly ignored.

Under the present circumstances, what inducement is there for any well-qualified medical gentleman entering the army? He obtains the rank of first lieutenant at first, it is true; and after, perhaps, thirty years' service, he obtains the rank of major, but here his ambition for any higher grade is effectually checked by a law forbidding him to look higher. When worn out and desirous of availing himself of the retired pay, he receives a pittance hardly sufficient to give himself subsistence, leaving out of the question the support of a family. Can we wonder that there are vacancies in the corps? The vacancies do not exist because the profession do not think it an honor to fill them. The distinction of

being an army-surgeon has always been a proud one, but under existing circumstances it is far from being a desirable one.

Surgeon-General Barnes, in his last annual report, thus truthfully gives the sentiment of the profession upon the subject, and we particularly commend his statements to the powers that be:—

"I am compelled to again repeat the statement made in previous reports, that very serious and increasing injury has resulted to the service from the continued prohibition of appointments and promotions in the Medical Corps. The inducements of pay and rank, as at present established, are not sufficient to make the service attractive or remunerative to physicians already engaged in practice; and though, through the prerequisite rigid examination of candidates, it has heretofore been found possible to secure a high grade of talent and qualification, it is upon the younger portion of the profession, the recent graduates, that we must depend in filling up existing vacancies. As a large proportion of applicants fail to pass satisfactory examinations (which require in each case from three to six days), it will be the work of several years to restore the Corps to the necessary standard of numbers as provided for in the Act of Congress approved July 28, 1866. Although ambition to pass the Army Medical Board brings forward many of the most promising graduates of the medical colleges, additional inducements of rank, pay, and promotion are becoming more and more necessary, not only to make the number of candidates equal to the needs of the service, but to retain the most desirable of them in the service under their frequent inducements to accept advantageous offers in civil life. The action of the American Medical Association, representing the medical profession of this country, regarding the unequal position of Medical Officers of the Army as compared to that of other Staff Corps, is based upon actual investigation of the subject, and presents to Congress all the facts in the case."

The passage by Congress of the bill in question is not only of the greatest possible moment to the Army Surgeons, but to the profession and the country at large. The time has come when we must, individually and collectively, exert our influence in the proper direction. There will doubtless be the same opposition to the passage of this bill as was the case with that for Naval Staff rank, but this should rather encourage than dishearten us. The Medical Staff of the army make a very modest request, and we heartily sympathize with them in their endeavors to have it granted. If they fail—if their meritorious services cannot be appreciated—we can comfort them with the assurance that there are plenty of opportunities for them outside of the army, to reap the rich fruits of their labors in the cause of science and humanity. We have always plenty of room for such men, if the country cannot afford to keep them.

THE CLOSE OF VOLUME VIII.

The present number closes the year and completes the Eighth Volume of The Medical Record. It is always easier to retrospect a task satisfactorily and conscientiously performed than to prospect promises which may not always be fulfilled. We propose at present to adopt the former course; to refer to accomplished facts, that we may enable our readers to draw their own inferences.

It is not our purpose, in speaking of the business success of our enterprise, to say more than that the circulation has markedly increased during the past year, and that the area of usefulness of the Record is extending to a degree that warrants the exercise of our best endeavors to deserve this flattering endorsement of the profession. We are well satisfied that it is doing as well as can be expected of any medical journal anywhere, and all we have to hope is, that the ratio of increased patronage may continue the same as for the past two or three years. We take this as an evidence, not so much of the good fortune of a particular periodical, as of a growing interest in the cause of medical literature in general. We believe that the profession, as a whole, read, think, and write more than they did ten or fifteen years ago. Medical journals are looked upon more as the means of reaching large audiences and of founding reputations, than as mere pecuniary risks of editors or publishers, for whom articles used to be written more for friendly aid than for anything else. Instead of begging for articles as formerly, the Editor finds it oftentimes difficult to find room for such as come unsolicited from the first writers in the country. While this may not be so well for every one who can write as it was twenty years ago, it is certainly better for the readers, giving them the advantages of a wide range of selection. We have endeavored to give our readers such an advantage, keeping constantly in mind the pressing wants of the reading and progressive general practitioner. Our table of contents will show that our transatlantic brethren are beginning to appreciate the benefits of addressing American audiences. Europe is sending to us its best platform speakers; its best novelists fill our literary magazines with original stories; and now its scientific medical men are beginning to offer their fresh manuscripts to American medical journals.

In our Lecture Department we have endeavored to give an array of subjects interesting to the active workers of our profession. Many of these lectures were given by special invitation, and phonographically reported. The advantages of the system which we have followed since the very commencement of the Record are obvious enough to any who will for a moment consider the subject. A lecture has many advantages over an original article. The style is suited to every learner, enabling the teacher to treat of his subject in detail, to give attention to little points, and

to colloquialize them in such a way as shall make them more than ordinarily impressive. In a word, the lecturer gives himself a latitude which would be unexpected and uncalled for in the writer of an original article. Again, such lectures may be looked upon as treasures of thought and as recitals of experience which would be entirely lost to the medical world if it were not for the skill of the phonographer who catches each word as it falls from the speaker.

In the last volume we have introduced a new feature in our hospital department, which we have reason to know meets a want long felt by such as are debarred the advantages of witnessing practice on a large scale. Our idea has been to generalize the experience of the different institutions in such a way as to give each and every reader the advantage of the most extensive observation in the treatment of any particular disease. This has been done by personal visitation of the different hospitals, and from notes carefully taken on the spot from the most authoritative sources. The credit of working up the material is due to Dr. Wesley M. Carpenter, of this city, a member of the staff, who has also reported for us many of the lectures. The admirable manner in which both these tasks have been accomplished we leave our many readers to judge.

We believe we have met another want in supplying to our readers a list of the original articles in our exchanges. It is obviously impossible to extract everything from our exchanges and find room for the same in the department of Progress of Medical Science. We have endeavored to compromise the matter by giving an abstract, as far as we are able, of all items of practical interest to the general practitioner, and merely indicating such papers by title as may be of interest to specialists and other classes of readers who may wish to have a general idea of what is going on about them, or to follow up some particular line of inquiry. The department of Progress of Medical Science represents the conjoint labors of several members of the staff. Dr. F. A. Castle has had charge of the English and French exchanges; Dr. Thomas E. Satterthwaite, of the German and Italian; Dr. Geo. R. Cutter, of the Scandinavian, Spanish, and Portuguese; and Dr. B. S. Thompson, of the American. We have, through the efforts of these gentlemen, been enabled to keep our readers well informed of the progress made in our art in different parts of the globe, every item being selected with special reference to its practical character.

Of the Editorial Department proper it does not become us to speak, except to say that in the discussion of the current medical topics we have striven to maintain for the journal independence of thought and judgment, an earnest desire to arrive at the truth, and a determination to do justice to all, irrespective of any party or clique whatsoever.

The plan of our Review Department has been to have notices written by experts in the different branches of medicine, and to exercise all the care necessary to obtain an impartial judgment of all the works submitted to us.

Our Society Reports are prepared specially for this journal, and mostly from phonographic reports. All the prominent societies have been thus represented.

Lastly, we would remind our readers of the addition which we have made in the establishment, during the past year, of the Medical Department for Life Insurance. As a department it has been a success, and has in many ways exceeded our expectations. Every care has been taken to exclude everything having any advertising tendency, confining the discussion of the various subjects interesting to medical examiners of life insurance companies to their scientific aspects. The credit of the general management of this department is due to Dr. A. H. Buck, the medical director of one of the life insurance companies of this city, whose experience and discrimination eminently fit him for the position.

Reviews and Notices of Books.

A Manual of Practical Hygiene, intended especially for Medical Officers of the Army and for Civil Medical Officers of Health. By Edmund A. Parkes, M.D., F.R.S., Prof. Military Hygiene in the Army Medical School, etc., etc. 4th edition. Philadelphia: Lindsay & Blakiston. 1873. 8vo, pp. 665.

The reputation of this work is well established and well earned. There has been so much said concerning sanitary science, so many crude suggestions made, so many wild theories promulgated by parties who choose to cultivate hygiene as a business, that it is refreshing to come down to the matter-of-fact science of the subject. In regard to accurate information founded upon observation and experience, Professor Parkes's book is not only a model in its way, but leads all other works of its class. When the first edition appeared as a text-book on hygiene for the Army Medical School of Great Britain, its purpose was avowed; and although meeting with the hearty endorsement of every friend of the soldier, and considered as a remarkably exhaustive *exposé* of useful scientific data, it failed to meet a want felt outside of the army. Still there has always been enough to learn on general hygiene to make the book desirable for every practical sanitarian, be he military or civil. In the last edition the long-wished for modification in the arrangement, in giving due prominence to civil hygiene, has been made, which gives the work the widest possible range for the general sanitarian, the scientist, and the political economist. Instead of the military part taking the lead, it is replaced by that portion intended for civil medical officers of health, more particularly.

In consequence of such a change, much new matter has been added, increasing the size of the volume.

For such as may not be acquainted with the general character of the work, it may be necessary to glance in a cursory manner at the divisions of the subjects and the plan of their treatment. The chapter on water, which is the first of the book, comprises a discussion of every matter connected therewith, its quantity, supply, distribution, composition, impurities, etc., and as a whole is full of very interesting, curious, and sug-

gestive facts. Air, which is the subject of the second chapter, is treated in the same exhaustive manner; section II., referring to the diseases produced by impurities in the air, is quite exhaustive and full of accurate information. The chapter on ventilation next follows, and gives a complete *resumé* of the science of the subject up to the present date. The numerous diagrams help the reader to appreciate at a glance the relative merits of the different systems as applied to hospitals, etc.

Food and its preparation occupy two long chapters. The nourishing qualities of each particular article are stated, the mode of detecting adulterations, the best methods of cooking, and the diseases caused by the use of improper articles of diet. The facts bearing upon the latter point are quite curious. In regard to food as a whole, a general mixed diet is insisted upon as the *sine qua non* of health, most of the data upon which such an opinion is founded having been gathered from an examination of the dietaries of armies. Condiments receive their share of attention as accessories; vinegar, pepper, and mustard being accorded their proper rank. Malt and alcoholic liquors are not considered of any special service, but on the contrary are, as far as the examination of the facts, as gathered from the experience of their use in the British army, go, shown to be not only useless but detrimental. Coffee and tea are properly ranked among the mild stimulants and arresters of tissue-waste. The chapters on soils, habitations, removal of excreta, warming houses, exercise, clothing, are full of interesting facts and useful hints. Climate, in its relations to health and disease, is discussed in Chap. XIV., and presents in a very concise and comprehensive manner the present advanced views upon the subject.

In reference to the prevention of common diseases and disinfection, nothing specially new is given, but all the necessary facts bearing upon the different divisions of these general questions are intelligibly presented. The second division of the book is devoted exclusively to the service of the soldier; and the statements made, and the conclusions drawn, are also based upon experiences and observations in the British army. These experiences are of particular value in establishing many points bearing more particularly upon the influence of climate, habits, diet, and clothing.

This edition is elegantly printed, and is embellished with its usual number of beautiful plates of the microscopical appearances of impurities in water and adulterations of different articles of food. Altogether it is the most complete work on hygiene which we have seen.

A PRACTICAL MANUAL OF THE DISEASES OF CHILDREN. With a formulary by EDWARD ELLIS, M.D., London, Physician to the Victoria Hospital for Sick Children, etc., etc. 2d edition. Lindsay & Blakiston. 12mo, pp. 333.

THIS little work treats of the principal diseases of infancy and childhood. It does not claim to be exhaustive in any sense, and consequently not a great deal is expected. The reader will, however, be very agreeably disappointed to find such a large amount of valuable and practical information in such a small space. The author has a faculty of sketching out the characteristics of disease and their treatment in striking outlines, and of making his points very clear and impressive. We have perused it with much satisfaction, and commend it to the attention of practitioners generally as a work of singular excellence.

DR. ALFRED UNDERHILL, of this city, died Dec. 7, 1873, aged 57.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, Oct. 22, 1873.

DR. ERSKINE MASON, PRESIDENT, in the Chair.

DR. JANEWAY presented a specimen for a candidate—as did also the secretary.

Dr. Janeway stated that the tumor of breast presented by Dr. Crosby at the last meeting was one of simple scirrhus. The cells in the central portion were quite granular. The point of interest was, that the periphery of the tumor showed infiltration of disease.

DILATED AND HYPERTROPHIED HEART.

DR. HALL presented a specimen of dilated and hypertrophied heart, adherent pericardium, with fatty and cirrhotic kidney, and fatty and cirrhotic liver.

Mary Hyland, admitted to Charity Hospital July 21, 1873, stated that her mother and daughter died of dropsy. She had swelling of feet and ankles four years ago, which condition lasted two months. No further trouble until one week before admission to hospital, when her feet and ankles became œdematous. At this same time she was taken with pain in the lumbar region. Complains of drowsy feeling and occasional attacks of dizziness. She is poorly nourished and pale. There is œdema of the feet, ankles, and eyelids. Urine contains albumen and fatty casts. Mitral regurgitant murmur. Patient's abdomen began to distend two weeks after admission. The anasarca and ascites slowly increased; in spite of the treatment, patient gradually lost strength and died of exhaustion, Oct. 18, 1873.

The autopsy was made eleven hours after death. Woman large and well nourished. Abdomen anasarcous, sub-conjunctival effusion, pupils very much dilated. Both lungs were œdematous and congested. The heart was enlarged, the walls thickened, and cavities very much dilated. The pericardium was adherent throughout. The kidneys were much reduced in size, the capsules were adherent, and their surface nodulated. The tubes were fatty, and the markings of the cortex were not demonstrable. The intestines, genitalia, and urinary apparatus were normal.

Adjourned.

Stated Meeting, Nov. 12, 1873.

DR. ERSKINE MASON, PRESIDENT, in the Chair.

PERICARDITIS IN A CHILD AGED EIGHT YEARS.

DR. MARY PUTNAM JACOBI presented a specimen of pericarditis in a child aged eight years. Two years previous to death the patient had an attack of chorea which lasted two weeks, but never any rheumatism. When first seen on Sept. 21, a diagnosis could be made very easily. There was great hypertrophy of the heart, dulness extending from the second to the seventh ribs and to the right of the sternum. The condition of mitral insufficiency was very marked, there being a loud blowing murmur at the apex, prolonged at the back. There was also found pneumonia of the middle lobe of the right lung.

The child improved somewhat under the treatment of digitaline and iodide of iron, but a relapse occurred on the 26th of Oct. The symptoms at that time were bronchial respiration on left side, dyspnœa, and the other physical rational evidences of pneumonia. The temperature ranged from 101° F. to 91° F., remaining

at the latter for some days previous to death. The patient soon became very much prostrated. On auscultation no exocardial murmuring could be discovered. The endocardial murmur was the same as before, except that during the height of the acute attack it was somewhat muffled. The area of former dulness was also somewhat increased.

During the last three or four days the face became œdematous, the dyspnœa increased, and the child finally died with symptoms of pulmonary œdema.

The heart, lungs, liver and spleen were presented for examination. The pericardial surface of the left ventricle was adherent throughout, and the other surfaces were covered with recent lymph. At the posterior surface over the right ventricle there were evidences of hemorrhagic extravasation. The mitral valve was insufficient, one-half being completely destroyed, and the other much thickened. The other valves were healthy. The presence of the recent lymph, with the absence of exocardial murmurs, entirely coincided with the fact so often noticed by authorities when an acute and secondary attack of pericarditis occurs.

The pericardial effusion was quite sanguinolent, the lungs were both very œdematous, and the middle lobe of the right lung was quite hepatized. Both the kidneys showed marked venous congestion of the pyramids. The liver was markedly fatty.

The points of interest in the specimen of pericarditis were: First, its rarity in a child—occurring, according to one observer, only once in seven hundred cases, and according to another once in one hundred and fifty. Secondly, the absence of rheumatism as the cause, the first symptom showing itself in chorea. Thirdly, the absence of exocardial murmurs in consequence of the secondary acute attack of pericarditis.

Dr. Loomis remarked that the absence of exocardial murmurs in these cases depended more upon the extent and locality of the adhesions than upon the fact of its being a secondary attack. If there were no extensive adhesions on the posterior surface, so that the motions of the heart are not interfered with, exocardial murmurs would be present even in the third attack; when these murmurs could not be heard anywhere else on account of adhesions, the friction sound could be distinctly made out over that portion of pericardium which covers the aorta. The specimen of Dr. Putnam was a very interesting one in other points of view, especially in reference to the increased size of the organ.

(To be continued.)

Correspondence.

THE INVENTION OF TUNNELLED URETHRAL INSTRUMENTS.

A SECOND LETTER FROM

PROFESSOR J. W. S. GOULEY, M.D.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—I have given the aggressors two months' grace to reply to my communication to THE MEDICAL RECORD of October 1, 1873, concerning the invention of tunnelled urethral instruments, and can no longer withhold from the profession the additional evidence,—a part of which I omitted in my first communication, in the hope that some acknowledgment would be made of the wrong done me.

Ample time and opportunity have thus been accorded the alleged principal complainant to deny (in writing, and not merely orally), that he had ever made, to his anonymous champion, the assertions, unsupported by a vestige of proof, in which he indulged,—and which would tend greatly to injure my personal and professional character, unless I should refute them all;—or to sustain "Honor to whom Honor is Due."

His silence may be regarded as an acknowledgment of responsibility for what "Honor to whom Honor is Due" says. I therefore think I am warranted in holding him accountable for it all,—"*qui facit per alium facit per se*"—and shall apply my remarks to him as well as to his champions.

In law, when the plaintiff fails to establish the *guilt* of the defendant, judgment is given in *favor* of the defendant. The burden of proof is always upon the *accuser's* side, and the accused is considered *innocent* until proved guilty.

In this case, however, I, the accused, fortified by truth, come forward to establish my innocence and vindicate my rightful claim.

Had I remained silent any longer under the accusation of claiming another's invention, my professional brethren would have little faith in statements which, in future, I might make upon any subject. Much as I regret to be obliged, in defence of my assailed character, to arraign before the profession a person for whom I had entertained great respect and whom I had always regarded as a sincere friend, I am compelled to do so in self-justification. His charges against me are too serious to be borne in silence. If he is right, my claim to the invention implies falsehood on my part, and I will not rest under any such imputation. Consequently I must prove him wrong; and to do this, I am obliged to place him under impeachment. Here the principles of truth and justice, as much as men's rights, are to be vindicated. If the aggressors suffer in consequence of the long-delayed investigation, it is a fault of their own, for I have not sought to injure them, but to defend myself against their gratuitous attacks—"*Veritas visu et mora, falsa festinatione et invertis valescunt.*"

It is proper now that I should clearly define my position, and thus leave no room for misconception in the mind of the reader. I claim:

1. That mine is a new *method* of catheterism upon a conductor, that is, a new *manner* of carrying out the *principle* of catheterism upon a conductor, which principle was originated and established, in the last century, by Pierre Joseph Desault.

2. That my method is an improvement on all the other modes of catheterism—in difficult cases—of which I have any knowledge.

3. That my instruments—tunnelled catheters and sounds—are different from all catheters and sounds previously known to me; that they do not bear any resemblance to the sliding tubes employed by Desault and by other, more modern, surgeons; and that they are used in an entirely different manner from the latter.

4. That the tunnel has been adapted by me to the vesical end of all urethral instruments which have been susceptible of this alteration,—hence the name tunnelled urethral instruments.

It will be perceived that it is A *method*, and not THE *principle*, of catheterism upon a conductor that I claim to have originated; and to carry this out, I claim to have invented special instruments—tunnelled sounds and catheters—the description of which shows that they are very different from those of Desault, of Doctor Buchanan of Glasgow, of Doctor Hutton of Dublin, of Mr. Maisonneuve and of Mr. Wakley.

Should it be urged that, inasmuch as I had so often

been in the company of Doctor Van Buren, he might possibly have suggested to me the idea of the tunnelled sound; I would say that the person who might offer this lame apology would surely depart from the text, beg the question, fail to understand it, or forget that the Doctor never claimed that he had made any such suggestion to me, but that I had robbed him of an invention which he had made many years ago before he knew me.

Another weak attempt at extenuation, worthy of the individual who might make the above, would be the misinterpretation of the statement, in my letter of November 19th, 1870, to Dr. Van Buren, that, "had I not made my claim public, I would most cheerfully yield to you:" which means that, rather than to have had a dispute about the matter, I would have permitted him (Dr. V. B.) to appropriate to himself what I knew belonged to me, if he had only requested it before I had made my claim public, and in print too. No one however but a partisan would interpret my ingenuous expression of a generous impulse as an acknowledgment of copartnership in the invention. Any one knowing me as well as Dr. Van Buren does, will readily recognize the fact that I have been, and am, too *self-reliant* to have accepted or ever to accept a copartnership in anything. The invention is wholly mine or it is not at all. The evidence will establish the one or the other.

If Dr. Van Buren had had the conviction that he was the author of the method I labored so hard and so constantly to establish, would he not have given the categorical answer required by my letter to him of November 19th, 1870, in which I say, "*Had I borrowed the idea from you, I should have been happy to acknowledge it.*" . . . "*I have asserted, and do now maintain, that they are mine, and no facts have been adduced to disprove my claim.*" . . . "*Your denial of any right to the invention will settle the point*". . . and which ended with, "*Now, my dear Doctor, that I have stated what I believe to be the truth in this matter; will you be so good as to set it right before the profession?*" Instead of answering the letter as it demanded to be answered, he said that it contained points the meaning of which he "could not get at." There is not a point in this letter which a medical Freshman could not thoroughly comprehend. If the Doctor was sincere in his affirmation that he could not understand the letter, so much the worse for his understanding. I wrote it with all the clearness and simplicity of which I was capable, in order to elicit from him an answer claiming or disclaiming the invention. His very failure to reply shows him to be in the wrong. But he does worse by making the claim covertly. He has not, himself, come out in print, but has induced others to do so, who evidently required little persuasion to attempt to "filch from me my good name," which is dearer to me than life. Whatever may have been their motive, they have shown a very bad animus, and are guilty of a breach of justice and of ethics. As they have failed to examine both sides of the question, which they were bound to do, they should be considered *particeps criminis*, for, to sustain wrong is to do wrong.

Every writer of a medical or surgical work, who undertakes to investigate a disputed question of priority in an invention, or in the establishment of some device tending to advance the cause of science or to relieve suffering humanity, is bound in conscience, courtesy, justice, and ethics to examine thoroughly all sides; that is, after having heard the contestants, and obtained from them in writing a clear definition of their respective positions and claims, to inquire whether all, or any part of what they claim, was previously known at home or abroad. Having done this, and weighed the whole evidence,—setting aside prejudice, partiality, or preconceived notions,—he is prepared to say: I have fairly investigated the question, and, in my opinion, the credit belongs to this or that one; or the method and instruments they both claim have long been known and used (stating where, when, and by whom), and both claimants are wrong.

The writer who does this will always have the respect and approval of the profession for his honesty and independence.

On the other hand, the investigating writer who has failed to hear *both* contestants in a question of priority of invention—whether he give credit to the right or to the wrong person—will surely forfeit the confidence of the whole profession, who will have good cause to discredit his future statements upon any topic.

The medical profession, in our days, will accept no magisterial statement, no dogmatism, however high may be the source. It requires that everything man advances, does, or claims to have done, in medical science, shall be founded upon reason, truth, and well-sustained argument, or absolutely demonstrated, before it can be received as correct.

In support of my argument against the probability of Dr. Van Buren's having *made* or used tunnelled urethral instruments many years ago, before he knew me, I have the honor to submit statements from the prominent surgical cutlers of New York City, who declare that, prior to 1864, they had no knowledge of such instruments, and that they consider me the rightful claimant of the invention: —

NEW YORK, September 1, 1873.

I, Edward Pfarre, at present partner in the establishment known as George Tiemann & Co., manufacturers of, and dealers in, surgical instruments, have, since 1837, been familiar with the workings of both the factory and the store, having served in the capacity of apprentice, workman, and foreman. I further declare that, prior to 1864, no instrument answering the description of tunnelled sound, given by Dr. Gouley in his recent work, had ever been manufactured or sold in our establishment, and that I consider Dr. J. W. S. Gouley as the inventor of the tunnelled sound.

(Signed) EDWARD PFARRE.

NEW YORK, September 25, 1773.

I, F. A. Stohlmann, senior partner of the firms known as Geo. Tiemann & Co. and Stohlman, Pfarre & Co., manufacturers of surgical instruments, beg leave to state that I have been connected with the house of Geo. Tiemann & Co. since 1840; that no instruments bearing any resemblance to tunnelled urethral instruments had ever, until 1864, been made or sold in the establishment; and that I consider Dr. J. W. S. Gouley as the inventor of tunnelled urethral instruments.

(Signed) F. A. STOHLMANN.

NEW YORK, September 2, 1873.

I have been a surgical instrument maker since 1844, having been in this capacity practically employed in Amsterdam (Holland) first; later in the establishment of A. Luther (Berlin), M. Goerck (Heidelberg), and others in Germany, up to 1850; from 1850 to 1853, at Mr. A. Lüer's, in Paris. In the last city I had, from daily visits to the principal hospitals, occasion to come in communication with the first physicians treating urinary diseases. In America I was engaged, from 1853 to 1860, in the establishments of Mr. Frederick Liese and the late Mr. Geo. Tiemann; since which

time I have had an establishment of my own, under the firm of Otto & Reynders, No. 64 Chatham Street, New York.

I have never known of tunnelled urethral instruments to bear any other name than that of Dr. J. W. S. Gouley, whom I believe to be the inventor.

I made his first tunnelled urethrotome in the Spring of 1866, and have always sold it as Gouley's urethrotome. Prior to 1864, neither in Europe nor in the United States have I seen or sold any instruments like Dr. Gouley's tunnelled urethral instruments.

(Signed) JOHN REYNDERS.

NEW YORK, September 2, 1873.

I am a surgical instrument maker, and have been engaged in this business for the past thirty-seven years, partly in Europe, and for the last twenty-seven years in this city. Up to the year 1866 I had no knowledge of an instrument called tunnelled urethrotome, in which year our firm, Otto & Reynders, made an instrument of this kind for Dr. J. W. S. Gouley, and I have never known them to go under any other name but that of Dr. J. W. S. Gouley, whom I believe to be the inventor.

(Signed) FERDINAND G. OTTO.

NEW YORK, September 4th, 1873.

I, William R. Leonard, have been salesman at Wade & Ford's, afterwards W. F. Ford & Co., manufacturers of surgical instruments in the city of New York, from 1859 to 1865. I am now principal salesman in the house of Shepard & Dudley, and have occupied this position ever since the organization of their surgical instrument department. During my connection with these establishments I have frequently sold tunnelled urethral instruments, which have always borne the name of Dr. Gouley. I know of no one else in connection with these instruments. I have always considered, and now regard, Dr. J. W. S. Gouley as the inventor of tunnelled urethral instruments.

(Signed) WILLIAM R. LEONARD.

NEW YORK, September 9th, 1873.

I have been a surgical instrument maker in England and the United States for the last thirty-eight years, and had never heard of, made, nor seen the instruments described as tunnelled urethral instruments, until they were shown to me by Dr. J. W. S. Gouley, whom I regard as their inventor.

(Signed) W. F. FORD.

In Tiemann's "Armamentarium Chirurgicum" (1872) my tunnelled urethral instruments are figured and duly credited to me. The firm Geo. Tiemann & Co., like our other cutlers, are too shrewd business men not to attribute to the right surgeon an invention which they know belongs to him. Even a mistake might be fatal to them commercially, for in that case they would probably forfeit the good-will of the wronged man, and lose the confidence and the patronage of a large proportion of the profession.

The cutlers who have made the above statements were surely not the manufacturers of the instruments which Dr. Van Buren alleges to have invented and used many years ago, before he knew me. Who, then, was their maker?

There are, in the country, ingenious surgeons who, much to their credit, have sometimes been obliged to be their own cutlers; but in large cities inventors of surgical instruments generally have them made by some responsible surgical cutler. If, however, Dr. Van Buren is able to show that he has ever been his own surgical cutler, and to exhibit a tunnelled sound which he can prove that he himself "made many years ago, and before he knew me," or if he can produce even a wooden model of the instrument, and prove that he made it many years ago, etc., I shall then say that I have unwittingly done him great injustice and shall do my best to repair the wrong. Nevertheless, my invention was made independently of anything of the sort which might before have existed. It suggested itself to me after I had read a description of Mr. Wakley's instruments, made after the plan of Desault's.

In my first communication I argued that, if Dr. Van Buren had made the invention he alleges to have made and used before 1851, it "would have been noticed and tried by his contemporaries, who would doubtless have given him due credit." But now I have the declaration of some of his former colleagues and of other surgeons of the highest repute who have practised for many years in New York. All these gentlemen declare that, prior to 1864, they had never seen, read nor heard of, any such instruments as I describe, under the name of tunnelled urethral instruments, and that they consider me the rightful claimant of the invention.

Among these surgeons are, Alfred C. Post, M.D., Professor of Surgery, Medical Department of the University of New York, since 1851, attending surgeon from 1836 to 1853, and consulting surgeon since 1853, to the New York Hospital; John O. Stone, M.D., attending surgeon to Bellevue Hospital from 1849 to 1855, and thirty-five years in practice in New York City; John J. Crane, M.D., surgeon to Bellevue Hospital since 1851, house-surgeon to the New York Hospital from 1842 to 1846; Ernst Krackowizer, M.D., surgeon to the New York and Mount Sinai Hospitals.

I might have added to this list a great number of names, but it will be sufficient for me to show that representative men in the profession, and prominent teachers of surgery, had no knowledge of these instruments until I made them known.

I shall next offer the testimony of two of Dr. Van Buren's house-surgeons who served with him, in Bellevue Hospital, many years ago. Dr. John Moore, now a Surgeon in the United States Army, and Dr. Stephen Smith, Surgeon to Bellevue Hospital, were both house-surgeons in Bellevue Hospital (1850 and 1851) in Doctor Van Buren's service, and they declare that they had never seen him use, nor heard him speak of, any urethral instruments similar to those I describe under the name of tunnelled urethral instruments.

Professor S. D. Gross, M.D., now of Philadelphia, was, in 1850 and 1851, professor of surgery in the Medical Department of the University of New York. He was then preparing his "Practical Treatise on the Diseases and Injuries of the Urinary Bladder, the Prostate Gland, and the Urethra," and was gathering facts from the experiences of the New York surgeons, whom he quotes largely. But he makes no mention, in either edition of this elaborate work, of any instruments bearing the slightest resemblance to tunnelled urethral instruments. Had they then existed—and in habitual use in the practice of a single surgeon, who had not, in violation of medical ethics, possessed a secret remedy or appliance—he would surely have noticed them; if not in the first, certainly in the second edition of his book.

In his paper on "Strictures of the Urethra of Extreme Calibre," Professor F. N. Otis, M.D., of New York,—who was aware that my claim to the invention

had been disputed on behalf of Dr. Van Buren, but who had sufficient reason to consider me the rightful claimant,—takes occasion to speak favorably of tunnelled urethral instruments, and to credit them to me.

So far, then, the evidence goes to prove that Dr. Van Buren had never made tunnelled instruments, nor employed the method of treating urethral strictures claimed for him, many years ago, before he knew me.

To the question, Were these instruments known *abroad* prior to 1864? the answer is, that none such were ever described in the British, French, or German works or periodicals prior to 1864. Sir Henry Thompson's excellent book on stricture, etc. (even to the third edition), contains nothing resembling my method or instruments. Mr. Teevan, of London, who is one of the best-informed Englishmen in urological literature, says, in his paper published in *The Lancet* of July 5, 1873: "The Americans would seem to be ahead of us on this point, for they have for some time possessed a most beautiful and useful instrument, designed, I believe, by Professor Gouley, of New York." In Ireland and Scotland the method and instruments are considered both good and new. Nothing like tunnelled urethral instruments is to be found in Civiale's voluminous writings. In Mr. Auguste Mercier's works (the most exhaustive on urinary diseases in any language), there is no mention of instruments in any way like mine. Among the inaugural dissertations for the doctorate in medicine, published in Paris, is the thesis of Dr. Bourgain (No. 88, 1870): "*De l'uréthrotomie externe sur conducteur, Procédé du Docteur Gouley.*" Dr. Bourgain was induced to write this essay from seeing one of his professors, Dr. Verneuil, perform my operation with my tunnelled catheter staff, which is not only considered good, but new in France. In Germany and Austria the instruments and method have been approved in the medical periodicals and by the best surgeons, and their claim to novelty has not been disputed.

The above facts and other evidence I have, together with the most careful search made in many ancient as well as modern works on surgery and in medical periodicals, lead me to conclude that the method and instruments which I claim to have devised were not known at home nor abroad before the year 1864.

Now comes a point of no mean import. The subject of priority of invention and of the method in question are treated by the opposition as a small matter, too trivial to merit any reply or notice on their part. Too insignificant, now that it is clearly proved to whom belongs the invention, but really of sufficient consequence to have induced them to claim it. I do not consider it a trivial matter to be accused of theft and falsehood. Neither do I think the accusation unworthy of refutation. Proving myself in the right, I prove the others in the wrong. Do *they* think it a trivial matter now to occupy the position in which their acts have placed them? Can they blame me for defending myself against an *anonymous* and gratuitous attack made by one with the sanction of the other? Has "Honor to whom Honor is Due" done himself *honor* by stabbing in the dark the reputation of a professional brother, residing in the same city? Is conduct of this kind in accord with medical ethics? If such a course be permitted to continue, no member of the profession will ever be protected from like attacks; anybody may come at any time and claim with impunity what is not his. The offence is to the whole profession as well as to myself, and the most ample apology is due.

Having established, as I think, that the invention is mine, I asked myself whether, after all, it is such a small matter as the aggressors wish to make it appear? In the latter part of a century so noted as this is for progress, great inventions, and advances in every department of science, it might, at first sight, appear a very small thing. But is any device to be considered trivial that tends to relieve human suffering, and to prolong and save life? The smallest and simplest invention with these aims is, in my belief, not unimportant. I think I made an advance in surgery when I devised instruments and a method of using them by which a great principle can be safely carried out; and many of the profession think as I do. But I shall now let others speak who are familiar with my instruments.

UNIVERSITY OF VIRGINIA, Nov. 4, 1873.

". . . . . I have just received yours of the 3d, and hasten to say that in my opinion you have defined your position with extreme accuracy and precision, in laying down very clearly the distinction between a *principle* and a *method* of carrying out a principle. You have at the same time abundantly established the justice of your claim to the invention of tunnelled urethral instruments and the method of catheterism by their instrumentality.

I can truly say that prior to 1864, I had never seen, read, nor heard of this method or these instruments. . . . . ."

(Signed) J. L. CABELL, M.D.,
Professor of Surgery, etc., University of Virginia.

PHILADELPHIA, Nov. 12, 1873.

". . . . . My visits (to New York) have been extremely brief. . . . . but I have often thought of calling on you and expressing my continued appreciation of the advances you have made in a special direction. I have long practised your method of treating urethral stricture, and consider it preferable to all others in reference to safety, facility in performance, and efficiency; and I think the tunnelled staff and filiform guide are now essentials of the surgery of the urethra. . . . . It gives me pleasure to endorse the merits of your improvements in the surgery of the urethra and your claims to their originality."

(Signed) R. J. LEVIS, M.D.,
Surgeon to the Pennsylvania Hospital, etc.

UNIVERSITY OF VIRGINIA, Nov. 13th, 1873.

". . . . . I have no hesitation in expressing my sense of the value of the whalebone guides and bridged bougies . . . . . they have already been of inestimable service to me, and when they attain that general recognition which I am confident awaits them, unskilful hands will no longer force false passages, and many lives will be prolonged. . . . ."

(Signed) J. S. DAVIS, M.D.,
Professor of Anatomy, etc., University of Virginia.

Professor A. Vanderveer, M.D., of Albany, writes me as follows:—

". . . . . Permit me just here to express my own feelings of gratitude for the advance you have made in urethral surgery. With the use of your tunnelled instruments I can now approach a case of stricture with a confidence and an ease of mind—as to the good results that will follow—that I never experienced before using them. . . . . ."

(Signed) A. VANDERVEER.
ALBANY, N. Y., Nov. 14th, 1873.

Nov. 20th, 1873.

To J. W. S. Gouley, M.D.

My dear Sir:—I have used your tunnelled sound in several instances when making external perineal urethrotomy. I do not say it is indispensable for the operation to succeed, but of all methods it is without doubt the easiest and safest one, furnishing an unerring guide from the entrance of the stricture all the way into the bladder.

Let me add that, before I read your letter in The Medical Record of Oct. 1st, 1873, I had not been aware that your claim as the inventor of the tunnelled catheter and sound had been called in question.

The principle and its embodiment form so important and so original a step in the treatment of urethral strictures, that, if you were laboring under the delusion of being the inventor, friendly correction right at the outset should have spared you the mortification of being mentioned now as appropriating another's claim to priority.

With such facts as are known to me, I hold you entitled to the honor of being the inventor of the tunnelled urethral instruments. At the same time, I doubt not that all those who now think Dr. Wm. H. Van Buren the inventor, by canvassing the subject with this gentleman again, may soon get aware that they have been laboring under a misapprehension, and that in consequence they will correct their mistake as publicly as they have stated it.

Yours respectfully,

(Signed) E. Krackowizer, M.D.,

Surgeon to Mount Sinai Hospital, and to the New York Hospital until its closure.

I have letters from Drs. Erskine Mason and Robert F. Weir, of New York, and John H. Brinton and John H. Packard, of Philadelphia, and similar testimony from many other quarters.

There are three others who are fully committed regarding these instruments. One is Dr. Van Buren, who has not always thought them so trivial, but has given them his most unqualified approval, which he cannot well take back. The second is Dr. Bumstead, who is quite as deeply committed, but in the opposite direction. He first claims the invention, in his book published in 1870, for his friend Dr. Van Buren, and then dogmatically condemns it. *Sic. . . !* The third is "Honor to whom Honor is Due," who is a little mixed and uncertain, and says, "*whatever may be* the value of tunnelling the end of urethral instruments." He does not say whether he has ever tried to learn how to use them. However, he thinks there is honor due to the inventor. Is he not a little inconsistent? If there is honor due to the inventor, the invention must be worth something. Perhaps "Honor to whom Honor is Due" is open to conviction, and may after a while see some good in the method and instruments, then repent and become a zealous convert to their use.

In concluding this communication I must quote Dr. Van Buren, who, through a champion, has made such grave charges against me, to show what he said on March 25th, 1873.

Tuesday, March 25

"Dear Gouley:—I have been absent for some days, ... and am thus late in thanking you for your book—of which the only opinion I have formed so far is that it is characteristic of its author in accuracy and self-reliance. I thank you for it, and shall use it with pleasure and profit. . . . . ."

"Sincerely,

(Signed) "Wm. H. Van Buren."

Dr. Van Buren received my book—which contains correct accounts of my tunnelled urethral instruments—early in March, 1873, and had sufficient time to examine it and see that I still persisted in claiming the invention. He had probably read as far as page 53, where the tunnelled sound is described and figured. If he had not done so before writing the above letter, surely, like all careful readers, he could not have failed to look at the table of contents and list of illustrations, where the author's tunnelled urethral instruments are mentioned. The opinion, he says, he has so far formed ("sincerely") of the book is, that it is "characteristic of its author in accuracy and self-reliance," which means that it is in "exact conformity to truth, free from mistakes, correct, precise, just, and nice." But it is "characteristic of its author," that is, the author himself exactly conforms to the truth, has made no mistakes, is correct, precise, just, and nice. The author, in the Doctor's opinion, is also self-reliant. Therefore the author "trusts to his own powers" for what he does and says, and not to those of any one else.

Could the Doctor have made a more plain admission that what I claim is really my own, and that in the invention I have trusted to my own powers and not to another's?

Had Dr. Van Buren been the inventor of the tunnelled sound, or had he even suggested it to me, would he not then have written me to say: In your several publications, and more recently in your book, you have not dealt fairly with me, for I invented and used this instrument long ago, before I knew you, or I suggested the idea to you? But the Doctor has never made any such complaint to me. I think I have been fair with him, for I have given him ample time and opportunity to claim or disclaim the invention. I say disclaim, because his champion (not himself) has publicly claimed it for the Doctor. But unfortunately for him, this very zealous friend has overshot his mark by causing to be printed the assertion (still uncontradicted by Dr. Van Buren), which he affirms came directly to him from Dr. Van Buren, that he (Dr. V. B.) "had *made*, and was in the *habit of employing*, instruments constructed upon this principle *many years ago*, and prior to the time when I became a student of medicine," or before I knew Dr. Van Buren, which is practically all the same.

In my defence, which I respectfully place in the hands of the profession, I have made statements in which I have observed "a regularity of account, a precision in points of fact, and a punctual reference to dates." That they "form a strong presumption of integrity," Dr. Van Buren tacitly admits in his letter of March 25, 1873, by saying that my "book is characteristic of its *author* in accuracy and self-reliance."

A little recapitulation here may not be out of place. In January, 1870, Dr. Bumstead claimed my invention for Dr. Van Buren, who then told me, orally, that this was not done on his authority and that he had never claimed it. In the third edition of Dr. Bumstead's book, the supposed error was not corrected. On March 25, 1873, Dr. Van Buren admitted, in a letter to me, that what I claimed was my own. On July 12, 1873, a champion, under an assumed name, reasserted what Dr. Bumstead had said, and more besides, and affirmed that he did so on the authority of Dr. Van Buren, who has given assent to this by preserving the most profound silence. His statement that I am *accurate* (a very high compliment, for which I thank him), is certainly at variance with the allegations of his champion. I must again call attention to the fact that, though these instruments were invented, and used by

me in public, since 1864, my claim was not disputed until 1870, some time after it had been discovered that the profession approved them. Also that Dr. Van Buren has never published a word about such a method or instruments, in any of his printed clinical lectures, or anywhere else; not even in his paper which appeared in the *New York Medical Journal*, December 1, 1868. In this paper, which was read before the Medical Society of the County of New York, November 2, 1868, the Doctor's object was to lay before his hearers the most advanced views and the most recent improvements in the treatment of urethral strictures. But he gave no account of the very useful method of treating difficult cases, which it is alleged that he introduced. I made some remarks to the Society (see *New York Medical Journal*, December 1, 1868, p. 296), after the reading of this paper, and spoke of my tunnelled urethrotome, and no question was then raised about authorship, though this was an excellent opportunity for it. The Doctor had then probably given little if any thought to this "small matter," about which, as he afterwards said, it "made little difference" whether it was attributed to him or to me! . . .

I think I have established the following points, to wit:—

1. That I never was a "student of medicine in Dr. Van Buren's office."

2. That tunnelled urethral instruments were not known at home nor abroad before 1864.

3. That Dr. Van Buren is not the inventor of tunnelled urethral instruments.

4. That I am the inventor of tunnelled urethral instruments, and that I am not indebted to Dr. Van Buren for a single suggestion in their invention or construction.

5. That the invention of tunnelled urethral instruments is not a trivial matter, but a decided advance in the surgery of the urinary organs, tending to relieve suffering and to prolong and save life.

6. That the allegations made against me are without foundation, and that they are consequently libellous.

56 West Thirty-eighth Street, New York.
December 1, 1873.

THE PROPER MODE OF PREPARING CAOUTCHOUC ELECTUARY.

To the Editor of The Medical Record.

Sir:—Having originally prepared for Dr. Theodore R. Varick, of this city, the electuary caoutchouc spoken of by him in The Medical Record, Nov. 15th, at his request I give a more detailed account of its preparation for the use of physicians who may desire to prescribe it in the exact form used by its author.

The caoutchouc should be in the crude state as imported, with no admixture of sulphur, lead, etc., and when cut showing a semi-transparent reddish-brown surface. ℥ i. of this in very thin slices is macerated in ℥ ii. ol. terebinth. pur. for one week, the mass being frequently stirred. It is then heated gently in a water-bath until solution is effected, and strained, care being taken to add sufficient ol. terebinth. to replace that evaporated. Two drachms (by weight) of this are next rubbed thoroughly with ℥ iss. pulv. sacch. alb., and ℥ iiss. mel. purificat. gradually added.

It will be necessary, in dispensing the electuary, to stir it thoroughly, as a granular deposit of sugar is gradually formed by standing.

James R. Mercein,
Graduate in Pharmacy.

Jersey City, N. J.

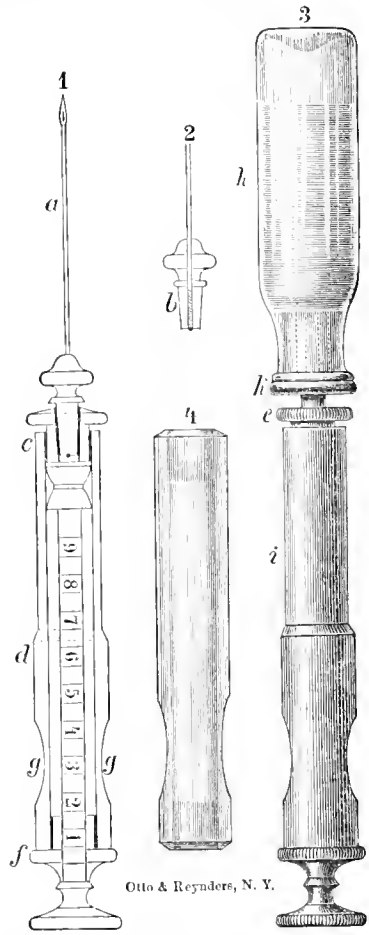
New Instruments.

A NEW HYPODERMIC SYRINGE.

Not many instruments are used as often as the Hypodermic Syringe, and are consequently so easily liable to be injured.

The Hypodermic Syringe formerly improved by Otto & Reynders, instrument-makers, of this city, had advantages which met with the full approbation of the interested parties, and which were very much imitated: the old steel canula was substituted by a golden one, and the mounting made of hard rubber instead of metal.

Experience has proved that there were other conditions to be fulfilled before the instrument could overcome many of the objections to its use. Many, if not all, the difficulties in construction, have now been overcome by the invention of Mr. Joseph Leiter, of Vienna, the description of whose instrument we present to our readers.



The canula of this new Hypodermic Syringe is made of steel, either gilt or nickel-plated outside and lined with platinum inside, avoiding thus oxidation entirely; at the same time it is so tempered that it can always be repointed by grinding only.

To facilitate the cleaning of the instrument, screwing and cementing are with only one exception entirely avoided. A mouthpiece, of conical form, in which the canula is screwed (so that when taken out both ends can be easily approached with a wire for clean-

ing purposes) is inserted in a conical ring, and both in the front part of the cylinder; by gently pressing together, the different parts will then fit air-tight.

The other end, through which the piston-rod passes, is closed in the same way; its opening is also conical, growing wider towards the end, by which the reinsertion of the cuff-shaped piston, after oiling, is made very easy. This is also an essential improvement; the attention only needs to be directed to the numerous troubles encountered when doing this with the old syringes, to fully appreciate its high value.

The syringe is made of hard rubber; near the piston end its body is ground out so that it can be held firmer. Its contents is one gramme, and corresponds with the scale on the piston rod, on which each mark denotes five centigrammes.

The method of filling the opaque cylinder is peculiar, and is one of the particular recommendations of the instrument, viz., pouring in the liquid when the piston is drawn back. The syringe is attached to a small vial (Fig. 3) containing the liquid, both reversed (the vial to be uppermost), and the piston drawn back; should the cylinder still contain any air, the same can be expelled by moving the piston several times in and out.

The stopple (*k*) used for this bottle consists of a tube whose one end fits in the ring (*c*), and whose other end is surrounded with rubber, so that it closes air-tight; it may remain on the vial when the latter is not in use, a small cap fastened on the same keeping the liquid from flowing out (as shown in Fig. 5).

Nevertheless, any vial with a cork may be used for filling the syringe in the manner described by putting a tube through the cork which fits in the ring (*c*), or the canula itself may be pierced through the cork, but only up to its end.

To meet all requirements the hard rubber cylinder can be replaced by one of the same size made of glass (whose walls are 2–2½ mm. thick). However, in regard to durability and exactness of finish the hard rubber cylinders are to be preferred.

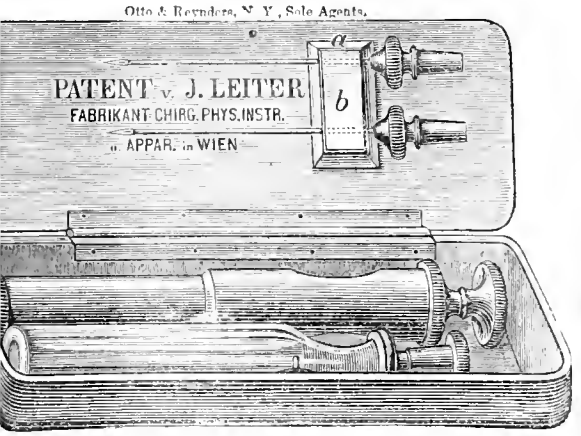


Fig. 5.

For this syringe we have constructed a neat case of hard rubber (Fig. 5); the lower part holds the syringe, and the vial containing five grammes; the needles are placed in the cover, and are held in position by springs.

The advantages of this syringe over others may be briefly enumerated as follows:—

(1) The platinum-lined steel canulas.

(2) The manner in which the canulas are attached to the fitting *b* (Fig. 2).

(3) The construction of the cylinder of hard rubber or glass without screws, and the simple manner in which the different parts are made to adhere.

(4) The construction of the stopple and the method of filling.

(5) The manner in which the canulas are held in the case.

Messrs. Otto & Reynders are the agents of this instrument for the United States, and Mr. Leiter has assigned his patent to them.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from November 19, 1873, to December 4, 1873.

ABADIE, E. H., Surgeon.—To report by letter to the Commanding General, Military Division of the Atlantic, for assignment to duty. S. O. 230, A. G. O., November 18, 1873.

BILL, J. H., Surgeon.—Granted leave of absence for 3 months on surgeon's certificate of disability. S. O. 231, A. G. O., November 19, 1873.

ALDEN, C. H., Surgeon.—Assigned to duty at Fort Walla Walla, W. T. S. O. 157, Department of the Columbia, Nov. 6, 1873.

WEBSTER, WARREN, Surgeon.—Assigned to duty at Angel Island, California. S. O. 133, Department of California, Nov. 4.

WOLVERTON, W. D., Assistant Surgeon.—Assigned to duty at Nashville, Tennessee. S. O. 202, Department of the South, Nov. 21, 1873.

GREENLEAF, C. R., Assistant Surgeon.—Assigned to duty at Huntsville, Alabama. S. O. 202, C. S., Department of the South.

HUNTINGTON, D. L., Assistant Surgeon.—Assigned to duty at Fort Stevens, Oregon. S. O. 157, Department of the Columbia, Nov. 6, 1873.

CALDWELL, D. G., Assistant Surgeon.—When relieved by Assistant Surgeon Wolverton, to comply with War Department orders in his case. S. O. 202, C. S., Department of the South.

TAYLOR, M. K., Assistant Surgeon.—When relieved by Assistant Surgeon Greenleaf, to comply with War Department orders in his case. S. O. 202, C. S., Department of the South.

KOERPER, E. H., Assistant Surgeon.—To report by letter to Commanding General, Military Division of the Atlantic, for assignment to duty. S. O. 230, A. G. O., Nov. 18, 1873.

VICKERY, R. S., Assistant Surgeon.—Assigned to duty at Jackson Barracks, New Orleans, Louisiana. S. O. 188, Department of the Gulf, Nov. 28, 1873.

STYER, CHAS., Assistant Surgeon.—Granted leave of absence for 30 days, with permission to leave limits of Department, and apply at Division Headquarters for 30 days' extension. S. O. 200, Department of the South, Nov. 19, 1873.

WIGGIN, A. W., Assistant Surgeon.—Assigned to duty at Fort Vancouver, W. T. S. O. 157, Department of the Columbia, Nov. 6, 1873.

KING, W. H., Assistant Surgeon.—Granted leave of absence for 30 days, with permission to leave limits of Department and apply at Division Headquarters for an extension of ten days. S. O. 204, Department of the South, Nov. 26, 1873.

Medical Items and News.

Dr. Lyon Playfair has been appointed Postmaster-General of Great Britain and Ireland.

The Danger of Storing Wet Coal.—People who prefer wetting the winter's store of coal to lay the dust, on putting it into their cellars, do not generally know that they are laying up for themselves a store of sore throats and other evils consequent upon the practice. Even the fire-damp, says an exchange, which escapes from the coal mines, arises from the slow decomposition of coal at temperatures of but little above that of the atmosphere, but under augmented pressure. By wetting a mass of freshly broken coal and putting it into a cellar, the mass is heated to such a degree that carburetted and sulphuretted hydrogen are given off for long periods of time and pervade the whole house. The liability of wet coal to mischievous results under such circumstances may be appreciated from the fact that there are several instances on record of spontaneous combustion of coal when stowed into the bunkers or holds of vessels. And from this cause, doubtless, many missing coal vessels have perished.

Death from Ether.—The wife of the cashier of the Freight Department of the Old Colony Railway, died in a dentist's office, in Boston, on the 10th of last month, while under the influence of ether. Only a small quantity had been administered when she was seized with a convulsion and soon died.

Diminution in the Attendance at the Vienna School of Medicine.—*The British Med. Jour.* says: "The number of students in the Vienna Medical Faculty diminishes sadly from year to year. Since Oppolzer's and Skoda's death the diminution is very marked. Where one could with difficulty get within ear-shot in days gone by, on account of the number attending, the wards now, it is stated, are almost empty. In Prag and Gratz, however, the attendance is unusually good.

Dr. B. W. McCready has resigned his position as Visiting Physician to Bellevue Hospital.

University of New York—Medical Department.—We learn that Professor Henry Draper has resigned the Chair of Physiology in the Medical Department of the University of the City of New York, and that Professor J. W. S. Arnold will give the lectures on that subject during the remainder of this session.

New York Society for the Relief of Widows and Orphans of Medical Men.—The 31st Annual Meeting of the Society was held at the College of Physicians and Surgeons, Nov. 26, 1873.

Officers for the ensuing year, who were elected, or whose terms of office had not expired:—

President—John O. Stone, M.D. *Vice-Presidents*—John R. Van Kleek, M.D.; Samuel T. Hubbard, M.D.; John G. Adams, M.D. *Treasurer*—J. W. G. Clements, M.D. *Secretary*—Gouverneur M. Smith, M.D.

Managers.—Term (1874, '75, '76), O. White, I. E. Taylor, E. Krackowizer, C. D. Smith, E. Delafield, R. Watts, R. A. Barry. Term (1873, '74, '75), Jared Linsley, A. Underhill, J. O. Smith, Edw. L. Beadle, Gouverneur M. Smith, Joel Foster, Thos. F. Cock. Term (1872, '73, '74), Willard Parker, Jas. Anderson, Gurdon Buck, J. L. Banks, Jas. H. Anderson, William Detmold, Wm. C. Roberts.

Medical Library and Journal Association of New York.—The annual meeting of this Association took place on the 2d of December last. The election for officers resulted in the choice of—

For *President*, Dr. John C. Peters; *1st Vice-President*, Dr. A. Jacobi; *2d Vice-President*, Dr. H. P. Farnham; *Recording Secretary*, Dr. A. H. Smith; *Corresponding Secretary*, Dr. George Bayles; *Treasurer*, Dr. J. H. Emerson; *Librarian*, Dr. A. E. M. Purdy.

As Trustees for Three Years: Drs. J. H. Leaming, F. A. Burrall, J. S. Banks, Ellsworth Eliot, T. M. Cheesman.

This Association continues to flourish, and were all the back dues of members paid, there would be not only a considerable sum for binding journals, but also a balance in the treasury.

The District Medical Society of the County of Hudson, N. J.—The officers chosen for the ensuing year are:—

President, J. D. McGill, M.D.; *Vice-President*, H. H. Abernethy, M.D.; *Secretary*, J. T. Field, M.D.; *Treasurer*, L. A. McBride, M.D.; *Reporter*, T. R. Varick, M.D.

Delegates to New Jersey Medical Society.—Drs. Payn, Chabert, Watson, Culver, Benson, Field, McGill, and Abernethy.

Alternates.—Drs. Miller, McBride, Bock, Gilman, Finn, McLaughlin, Talson, and Rau.

Committee on Ethics.—Drs. Chabert, Miller, Watson, Field, Benson, and Culver.

Errata.—Dr. Rose writes: In No. 191 of your valuable paper, where you give a report of a meeting of the Journal and Library Association I find some errors:—

In answer to a question raised by Dr. Sell, I suggested that immersion (*not the water dressing*) prevented the occurrence of certain ferments (not foments) which would cause a great deal of reaction. The hot poultice is ordinarily constituted of material which would contribute largely to the production of *fermentation*, hence the great disadvantage attending its use.

Statistics of Deaths from Anæsthetics.—In the returns recently published by Dr. Morgan, it is shown that the ratio of mortality from the different anæsthetics is as follows:

One death in 23,204 from administration of ether; one in 5,588 from ether and chloroform; one in 5,000 from the bichloride of methyl, and 0 in 2,873 from chloroform.

New Publications.

Books Received.

Transactions of American Medical Association, Vol. 24. 1873.

Parasitic Origin of Skin Diseases, etc. By Jabez Hogg. London: Baillière, Tindal & Cox. Paris and Madrid, 1873.

Handbook of Hygiene and Sanitary Science. By Geo. Wilson, M.A., M.D., etc., Edinburgh. Phila.: Lindsay & Blakiston. 1873.

Handbook of Theory and Practice of Medicine. By Frederick T. Roberts, M.D., B.Sc., M.R.C.P., etc. Phila.: Lindsay & Blakiston. 1873.

A System of Midwifery, Including Diseases of Pregnancy and Puerperal State. By William Leishman, M.D., Regius Prof. of Midwifery, University of Glasgow, Scotland. Phila.: H. C. Lea. 1873.

Medical Department of Life Insurance.

THE BEARING OF INEBRIETY ON LIFE INSURANCE.

By WILLIAM C. WEY, M.D.,

ELMIRA, NEW YORK.

It must be admitted that the principal safeguard against loss in life insurance consists in the care and discrimination with which medical examinations are conducted. It is not enough to learn, by demonstration in our presence, that the applicant is apparently in perfect health. As the victim of Bright's disease may suddenly perish without manifesting indications of his malady; in the same way, only more slowly and by visible tokens, the inebriate by inheritance or by acquired habit may lose the appearance of health, and put on the positive sign and seal of degeneracy and decay. In one case the undermining disease betrayed its presence by no recognizable symptoms; it was not suspected by the patient, it formed no part of his family history, and could not therefore be anticipated or averted. It came with explosive violence, like a railway shock, and an insurance company is called upon to adjust damages sustained by reason of the death. In the other case the family history, if accurately given, may or may not throw light upon the prospective development of inebriety. If the habit of alcoholic indulgence comes by inheritance, a careful analysis of the causes of death in the family for two or three generations will assuredly set forth the fact that the tendency to "repeat itself" is as prominently stamped on inebriety as on insanity, cancer, or other well-known transmitted disorder. The death of a parent or other near relative in consequence of "apoplexy," should be as carefully investigated as death by suicide. "Apoplexy," when examined, may be found to mean the abrupt termination of prolonged alcoholic indulgence, called by this term to mitigate the nature of the victim's habit or to soothe the feelings of friends and relations. In the same way "pneumonia," if interrogated, may reveal that form of subacute disease which, in a person fortified by abstemiousness of life, would not occur, or, taking place, would quickly resolve itself in recovery, without leaving trace of its existence. In an inebriate, on the contrary, with vital powers greatly depressed by continued indulgence, inflammation of an important organ would stop only with the life of the patient, in obedience to a law which proclaims that the "elimination of disease is effected by and is proportionate to the vigor of the remaining healthy functions, and not to the extent of diseased actions."*

Faithful scrutiny of many other causes of death among ancestors, near and remote, would exhibit, perhaps, a permeating inebriate tendency, whose mischievous influence would be everywhere witnessed, as inclining to shorten life, especially in the male line of descent.

In confirmation of this view, and to illustrate the unreliability of mortuary returns, I am enabled to present the following statistical facts, kindly furnished by an insurance company with which I have the honor to be connected:—

Total number of deaths in 23 years	981
From delirium tremens	10
" intemperance, terminating otherwise than in delirium tremens	19
	— 29

Nearly 3 per cent.

* Samuel Henry Dickson, M.D.

Average number of years the 29 were insured	6½
" " " " 981 "	not yet calculated.
Average age at insurance	37 1-9 years.
Average age at death	43 3-5 years.
Average height of 20 of the number at time of insurance	5 ft. 7½ in.
Average weight of 20 of the number at time of insurance	160 pounds.

Occupations.—1 lawyer; 2 bankers; 6 merchants; 3 clerks; 5 cattle brokers and butchers; 2 liquor merchants; 2 tailors; 4 shop-keepers; 1 plumber; 1 auctioneer; 1 printer; 1 unknown.

Nationalities.—19 Native Americans; 1 German; 4 Irishmen; 1 Scotchman; 1 Canadian; 3 unknown.

Hereditary.—In two cases the father had died of intemperance, and in two others a brother had died from the same cause.

Married or Single.—21 married; 5 single; 3 unknown.

Mode of Death.—By delirium tremens, 10; apoplexy, 3; epilepsy, 1; insanity, 3; pneumonia, 2; inflammation of brain, 1; gastritis, 1; falling from carriage, 1; heart disease, 1; and the remainder from a complication of diseases.

The above statement is interesting and instructive, as showing a weak side of human nature, in which a habit of exaggeration is stronger than a disposition to tell the truth. It cannot be believed that in nine hundred and eighty-one deaths only twenty-nine, or about three per cent., took place from the effects of alcoholism. Nearly one thousand insured men indicate a state or condition in society favorable to the production of inebriety to a greater extent than three per cent., for the reason that they represent a period of business activity which is subject to successes and reverses, involving the most severe mental, moral, and physical strain and effort to which they can be subjected,—a period and condition inclining, above all other causes except inheritance, to the production of intemperate habits. It may be inferred, also, that more than three per cent. of the insured partake of inebriety by transmission, which leaves a large number to lapse into alcoholism by the force of circumstances alone.

A glance at the occupation of twenty-two out of the twenty-nine persons mentioned in the list, will suggest the moral bearing of financial embarrassment on this subject, with its consequent reduction of compensation, loss of employment, diminished sales, scanty collections, general distrust, and individual disappointment, despondency, and suffering.

Additional statistics, made to reach to the marrow of the question, and covering a larger area of observation, are needed to demonstrate the relations existing between acquired or inherited alcoholism and increased death-rate among the insured.

In the table before us we do not see the expansion of alcoholic consequences as they are observed in every-day life. We see as little of the certain effects of drunkenness, except in the item of delirium tremens, as will subserve the purpose of individuals in procuring specific amounts of insurance on the lives of deceased friends. Death, as a direct or remote penalty of intemperance, is concealed to the extent of the tact and ingenuity of interested persons to keep the facts of each case from the knowledge of insurance officials. Cunning as are the devices employed to admit inebriates to the benefits of insurance, equally unwarrantable are the arts practised to obtain the payment of policies in case of death, as one or two examples will show.

It was the duty of the writer on one occasion to meet in consultation a physician who had charge of a case of delirium tremens. The disease appeared as a sequel of acute rheumatism, in a hard-drinking young man, by occupation a saloon-keeper. After several days and nights of vigilance, he was made to sleep, his delirium subsided, and he partook of food. In the midst of slumber a procession passed his door, led by a band of music. The sound of drums and brass instruments suddenly striking on his ear aroused him to excitement. The full force of delirium returned, remedies proved unavailing, and he died. A policy

of insurance had been effected on his life a short time before, in which it was stipulated that in case death was produced or ascertained to be dependent upon habits of intemperance, his heirs should waive all claim against the insurance company for the amount of the policy. Several weeks later a representative of an insurance company, sent to investigate the case, presented full proof, in the usual way, of the death and burial of the party, including a certificate from the attending physician, which gave rheumatism as the cause of the fatal issue. Rebutting testimony being promised to show the actual cause of death, the family of the deceased wisely abandoned the claim.

An inebriate, whose long-continued habit was understood in the community, and whose impaired physical condition threatened speedy death, was taken by an unscrupulous agent to a medical examiner, with a request that he be accepted as a good risk, adding, when the shocking condition of the infirm man was pointed out, that he was as likely to live as many he had previously examined. The agent relied too implicitly upon the amiability of the physician, and was sent from his office with a stern rebuke for his insolence. In less than three months the nearly demented drunkard tottered into his grave.

A man whose daily custom was known universally, for he was a "publican," was rejected by a medical examiner, to be immediately caught up by the agent of another company and accepted as an unexceptional risk.

Like instances of fraud in connection with inebriety and life insurance might be multiplied from personal experience; but enough has been furnished to show the systematic design on the part of agents, the applicant, and the friends and relatives of the latter, to deceive for purposes of profit to be immediately or prospectively realized from the company. Occasionally medical officers become parties in these transactions; and it has been observed that a tripartite agreement of a physician, an agent, and a sick person seeking insurance, may reveal a degree of criminal boldness and audacity in keeping with the deliberate proceedings of incendiaries and highwaymen. Brief allusion will be made to two such instances of nefarious compact.

A consumptive, whose mother and sister had died of tuberculosis, was offered by an agent and accepted by the regular medical examiner of an insurance company, in the stage of softening of the disease, and a policy was obtained upon his life. He died in seven months, and the certificate furnished by the medical examiner, who continued in attendance, showed that death was occasioned by "inflammation of the lungs;" duration of disease, "three weeks." Examination by a special agent of the insurance company brought all the details of the transaction to light, and resulted simply *in the discovery of the fraud*. The guilty officials escaped even the publicity of their crime, much less adequate punishment.

The wife of a middle-aged man, who had lain four or five years in bed with inflammation of the spinal cord, resulting in hemiplegia, with the aid of the agent and a medical examiner, both of whom visited the applicant, secured insurance upon his life. Soon after the payment of the first premium, the home office learned the nature of the case and cancelled the policy, but no effort was made to bring the offending parties to justice. In three months the hemiplegic died.

A brief but interesting paper on "Personal Habits," by Dr. Edward W. Lambert, of New York, appeared in this department of THE MEDICAL RECORD on the 15th May, 1873, in which the difficulty of procuring satisfactory information concerning the daily life of applicants for insurance is made the subject of comment. The position of the author of the paper, as chief medical officer in an extensive company, renders his testimony on this subject exceptionally valuable; and the following extracts indicate the delicate and responsible nature of his duties, as well as his conviction of the necessity for more explicit information in respect to the manner of life of persons who desire the benefits of insurance: "No question presents more difficulties than that relating to the personal habits of the applicant. As a rule, this question is answered more indefinitely than any other in the application; yet this is *the question*, of all others, which will give the most information as to the probable longevity of the individual, and it ought to be answered so definitely and clearly, that he who reads may correctly understand the manner of the daily life of the applicant."

Added to the inebriate disposition, and so immediately dependent upon it as to prove unity of causation, may be mentioned syphilis and epilepsy, which are connecting links, from whose combination or inter-communication an endless variety of morbid phenomena are engrafted on otherwise sound family stock. In this association the question of insanity naturally occurs. Intemperance is recognized as the chief factor in the production of mental alienation. It has taken a long time to sift the maze of statistics on this subject, and arrive at a just conclusion, in accordance with the inevitable laws of transmitted mental and physical defect or unsoundness. Individual instances of inebriate transmission, with insane development interwoven in the family line, have been frequently presented to us, and we have been taught to accord more than ordinary significance to striking illustrations of physical traits and deficiencies, whose origin and expansion into confirmed habits of life have contaminated or impressed many families, through exhaustless forms of implication.

We have seen the power of inebriate transmission exerted on the males in each succeeding generation, through a long history, acquiring rather than losing intensity, because of the assimilating leaven of intermarriage with stock in which the same fault of inheritance is perceived to exist. Interruption of the inebriate, the insane, or the epileptic element, for one or two generations, may or may not be explained to our satisfaction. The admixture of blood from a source not contaminated by these evils lessens the degree and violence of their manifestation, and may in time, if marriage continues to be fortunate and eradicable, altogether remove the family tendency to such disorders. On the contrary, with a proclivity to inebriety, insanity, and crime still in existence, and with no apparent causes in operation to arrest their development, it not unfrequently occurs that for one, or two, or three generations the moral or physical taint is not produced, and it seems as if its power in the system had actually ceased to be productive of evil results. In accordance with a "determinate law," however, the sin of the father is visited upon the children, and sooner or later, with greater or less intensity, the physical condition of inherited inebriety is again revealed in the family.

Thus, it will be observed, the extent of inebriety as an agent of physical impairment in the prospective issues of life insurance is almost limitless. It is impossible, in the space of this paper, even to allude to all the prominent features of the subject, which crowd upon the mind, in connection with longevity and expectancy of life, as measured by charts and tables.

It is apparent that life-insurance companies have not shown that degree of sagacity in dealing with this

complex question which its importance demands. They have adopted such a course as admits to privileges, not the descendant of the inebriate alone, but the inebriate himself, and this, too, with his family history open and plain, in one sense, for the inspection and edification of company officials; and in another sense, as thoroughly closed against scrutiny as the pages of a sealed book.

The pertinent fact that something more than mere examination of an applicant for insurance is to be canvassed and considered does not appear to be taken into account. While questions are put to elicit information respecting an inherited tendency to "insanity, pulmonary, scrofulous, or any other constitutional disease," which contemplates a survey of the family history, the whole subject of inebriety is summed up by one company, at least, in the following, answered by the applicant: "Is the party addicted to the habitual use of spirituous liquors or opium?" and to the additional query by the medical examiner: "Do you believe the party to be sober and temperate in all the habits of life?"

To aid discussion in this inquiry, and for the purpose of keeping within the bounds of a physical estimate of inebriety, it will at once appear that the answer of the first question relates absolutely to the habit of the individual at the time of examination. The question is put to ascertain if the disease of alcoholism is already established, just as similar inquiries are propounded, and many tests used, to determine if the party is laboring under cardiac, pulmonary, or other organic disease. Acknowledgment of a vital law by which "characteristics cling to families," mental as well as physical, is disregarded in this instance, to be accepted in matters less significant, because more open to inspection and review. For instance, the family history may be clearly and impartially told, and a record of tuberculous fatality revealed, which stamps with suspicion the entire blood or race, in direct or collateral descent. In case the applicant is received as not habitually or even occasionally addicted to the use of spirituous liquors, and the family history is not critically interrogated in respect to proneness to inebriety, the insurance company incurs a risk in accepting such a person, that a latent physical degeneracy will in time break forth with as much intensity as stamped its manifestation in former generations.

The question should be asked in such a manner as to include the rules of hereditary descent; and to accomplish this end, it should be divided, the first portion taking in a survey of the family history, carefully and truthfully prepared, while the remainder, based upon the former, deals with the individual himself.

Very cursory inspection of the family history might show the outcropping of inebriety at an *early age* in every generation in which it appeared, or it might indicate *sudden* development of the habit, using the word in its ordinary sense, at the age of thirty or thirty-five years. The case under review might prove an exception to the rule, in which event, all other circumstances being weighed and appreciated, the insurance company might in one instance accept the risk as denoting the non-appearance of the infirmity of drunkenness in the person and generation before them, while in another contingency, reaching a result by the only process at their command, which would be sound, physiological and determinate, the hazard would also be taken, simply because the party had passed that period in life at which his forefathers, as if smitten by withering disease, had fallen victims to intemperate habits.

Examined critically, by such tests as vital science insists on imposing, the occurrence of inebriety in a family line at a specific age is not indicative of rapid causation or of sudden development. It should be regarded as the production or generation of physical phenomena, under circumstances favorable to their elimination, irrespective of mental and moral convictions and the highest scale of enlightenment. Subject to causes already mentioned, which interrupt the force of the inborn tendency, such as marriage with non-inebriate stock, the infirmity rises or falls in successive generations like the tides or fluctuations which govern the tuberculous habit, the insane disposition, or the marked and distinctive family lineaments or general physical configuration.

If we had access to minute details of pedigree in this particular, we could arrive at the starting or engrafting point of inebriety, and trace its growth and culmination along the line of descent, by repetition of the habit here and there, by the manifestation of insanity instead of drunkenness, in general or specific form, by the development of mania as an immediate product of intemperance, by that peculiar condition of the nervous system allied to aberration of mind, "which will necessarily be transmitted, under various forms and with increasing fatality, to his descendants."* and by the interminable catalogue of results which proceed directly and remotely from imbecility, vagrancy, and crime.

It is difficult, indeed quite impossible, to analyze a family history through many generations, setting down in their appropriate order inebriety, insanity, nervous disorganization, imbecility, criminal instincts, and eccentricity; weaving them in connected and interchangeable dependence, and demonstrating the fact that their occurrence is in accordance with fixed and unalterable rules which govern and control the race. This difficulty arises solely from the hopelessness of tracing the family history with such particularity as to make these elements appear in the order of succession, or as cause and effect. Marking the consequences of drunkenness in all its details for two, three, and four generations, we are rarely able to go farther back in family history to the origin of the habit. For the sake of precision it would be desirable to procure such explicit information; but for purposes of illustration, our knowledge is sufficiently specific and reliable. It has been derived chiefly from the wide field of observation open to the physician, whose opportunities for the study of psychical and physical phenomena are constant and absorbing. It is such knowledge as embraces the parent stock, the origin of observation, whose physical and moral traits, with varying degree of force and circumstance, enter into and mould and fashion the lives, character, and diseases of the progeny. It is such knowledge also as suggests to insurance companies the danger of taking risk in lives which are liable to terminate in some of the immediate or consecutive forms of alcoholism before the usual period of expectancy. It is such knowledge, too, as opens a vast extent of inquiry in a direction but little cultivated. A careful study of inebriety, prompted first by observation of patent facts, and next by the grouping of such facts in laws of morbid phenomena, has been the means of transforming what was believed to be "*a vice*" into the domain of diseases, whereby the question of individual responsibility is being settled, and with it the vital problems of prevention and rational treatment, and the duty of the State towards the hapless subjects of alcoholism.†

* Anstie.—In Sheppard's "Lectures on Madness."

† The "Symptoms of Inebriety" will be discussed in a later number of the RECORD.

ON THE SELECTION OF MEDICAL EXAMINERS.

BY A MEDICAL DIRECTOR.

In the report of the Hon. Orlow W. Chapman, Superintendent of Life Insurance of the State of New York, we find these words: "What plan can be adopted that will give the most perfect security to a company in its selection of Medical Examiners? . . . . . The desirability of having the best medical examiners possible will be universally conceded. But the question here presented is: What plan can be adopted that will the most certainly secure such? If this inquiry be of no importance to old, it may be vital to new, companies."

At the recent National Insurance Convention, held in the City of Boston in the month of September last, Dr. T. S. Lambert, of this city, having been invited to address the Convention, quoted these words of Superintendent Chapman, and followed them by some practical and, in the main, sound remarks upon the general question of medical examinations. The only words in the printed report * which seem to convey an answer to this important question of our State Superintendent are the following: "But a matter of still greater importance is this: Can a sufficient number of examiners be found everywhere to conduct examinations, and determine upon the reliability and insurability of the proposed persons? That certainly cannot be done.

"But if the question is, Can a sufficient number of persons be found who can make such a complete medical examination as will, with the other blanks properly filled, permit an expert at the home office to judge of the reliability and insurability of the proposed person, the answer is, Yes, in regard to most places.

"To ask a medical man to give a correct physical description of a person, in answer to numerous and detailed questions, is a very different thing from asking him to give answers to a few indefinite questions, and a judgment upon the vitally important question of the insurability of the person.

"Almost any ordinary or average physician can do the former duty well; very few, and none without special study and practice, can do the latter.

"The ordinary mode of conducting medical examinations not only, but the intent in having them done, is therefore wrong.

"The wrong way is also difficult as well as subversive of the object—the security of the company.

"The right way is easy, and confirms the security of a company, since it is the *sine qua non*. By the right way, also, the ability and capacity of the examiner for his duty is at once determined by the very manner in which he does it."

While in these words we do not by any means find an answer to the important question at issue, nevertheless we are led to infer from them that the safest course to pursue is to allow any physician to act as a medical examiner, and then to judge from the nature of his report whether the person examined is a first, second, or third class risk, and also whether the examiner himself is a first, second, or third class doctor.

We have already, in a previous number of THE RECORD (July 15), described as clearly as we could the plan which seemed to us most likely to afford the life companies the greatest security in the selection of their medical examiners. This plan has been thoroughly tested by one of the companies for a number of years past, and has more recently been adopted by two or three others. Its principal feature is to entrust to physicians of well-known ability and integrity the selection of those who shall act as medical examiners in their respective States or Counties. It involves not a little expense, but if worth having, it certainly is worth paying for, though we are sure that the ultimate saving in death-losses will more than compensate for the original outlay. That it is safer than the plan which Dr. Lambert's words at least imply, seem to us hardly to require discussion. If we could believe in the proposition that all doctors are strictly conscientious and truthful, we should be disposed to say that Dr. L.'s plan of guarding against professional ignorance and incompetency, by requiring the examiner to fill out a very complicated blank, was perhaps the easiest and cheapest way of protecting the company's interests. We do not believe, however, that a blank can be invented which will throw light upon the question of an examiner's truthfulness and willingness to do his full duty toward the company employing him. Nothing can be easier for the dishonest or careless examiner than to fill out any and all blanks now in use among the life companies in such a manner as to make the "worse appear the better cause" to the most astute of medical directors. Such being the case, is it not clear that the characteristic most to be insisted upon in an examiner is honesty? And is it not equally plain that a physician's professional brethren are in a better position to judge of his moral as well as professional standing than any agent or other non-professional person?

We hope that the day is not far distant when all life-insurance companies will see the necessity of enlisting the best elements of the medical profession in their service, and when the position of medical examiner to a life-insurance company will be considered as an honor to be sought for, and to be obtained only by the best men in the profession. It is a question well worthy of thoughtful consideration whether this desired object could not be obtained by something like united action among the companies. But the discussion of this question would lead us too far from our immediate theme.

* Report of the Proceedings of the National Insurance Convention of the United States. Compiled by Oliver Pillsbury, Secretary of the Convention. Boston, Mass., 1873.

MORTALITY EXPERIENCE OF AMERICAN MISSIONARIES.*

BY NATHAN WILLEY.

THE following tables † comprise a record of the mortality experience of over 1,000 missionaries of the A. B. C. F. M., including more than 13,000 years' service, mostly in foreign lands. The original data from which these tables were compiled were prepared by Rev. John A. Vinton, of Winchester, Massachusetts. Mr. Vinton has spent several years in preparing statistical information of this kind for the Board, and but few men ever lived more competent to execute such a task.

These tables embrace all the missions established by the Board since its organization. In some cases, missions have been transferred to other Boards, as the Presbyterian and Reformed Dutch, and from that time the A. B. C. F. M. has had no further control over them. Missions have also been discontinued, as in the Sandwich Islands and Borneo. In these cases the data fur-

* From the *Insurance Monitor*, November, 1873.

† Only the Recapitulation table has been introduced here.—Editor RECORD.

nished do not generally extend beyond the period of transfer or discontinuance.

In preparing these tables, the compiler was furnished with cards containing the name, place and date of birth, date of embarkation, of death, release, or return to this country, and the field of labor of each missionary. In a very few instances the date of birth was not given, but the number of years of exposure was always ascertained. In such cases the average expected mortality of the known ages exposed in each locality was found, and the additional mortality from the unknown ages, found by a simple proportion, was added to it.

It will be noticed that there is a great difference in the mortality in different parts of the globe. In Western Africa, Southern India, Southern China, and the Indian Archipelago, the mortality has been from three to nearly seven times as great as the American Experience Tables indicate, while in the Sandwich Islands and in Southern Africa the aggregate mortality has been less. In the Sandwich Islands, though lying within the tropics, the mountainous nature of the country enables foreigners to select places of residence where the air is as mild as in the mountains of Tennessee; and in South Africa, the mission stations are on an elevated plateau, where the climate is as healthy and salubrious as in West Virginia.

But in all that belt of country commencing with Turkey, and extending eastward and southward through Syria, Persia, India, and Southern China, and especially in the Indian Ocean, the mortality of American missionaries has been excessive, as a glance at the RECAPITULATION TABLE will show. In these countries, fevers and the cholera have caused a large ratio of the deaths, while only a very small number have died by violence.

One important and instructive feature in these tables is the comparative mortality of males and females. In all the unhealthy countries, with the singular exception of Persia, the mortality among women is much greater than among men. This may be partly accounted for by the younger age of embarkation and the less previous exposure to hardship. Among the missionaries to Turkey, the mortality among females who embarked under the age of twenty-five has been about two-and-a-half times as great as among those who were older at the time of leaving home. Among the female lives in the Sandwich Islands, we find eleven deaths between the ages of twenty-five and thirty-nine inclusive, while the tabular mortality calls for a fraction over six.

We find also a good illustration of the influence of climatic differences upon Northern men and women living in the Southern States. In the missions among the Cherokee and Choctaw Indians, in the States of Georgia, Mississippi, Arkansas, and the Indian Territory, the mortality of males is about 44 per cent. and of females 46 per cent. greater than the tabular rate.

Another circumstance which will make these tables of great practical value to our life-insurance companies, is the fact that nearly all these lives are from the Northern States, not more than one or two per cent. being from the South or foreign countries.

We cannot assert that these tables give the total mortality of the American missionaries arising from their foreign residence. In many cases, finding that health and usefulness were ruined, the missionary bade farewell to his chosen field and returned to die in his native land. If his recovery was deemed impossible, he severed his connection from the Board, and his subsequent record does not appear in this table. Neither have we any account of those whose health, though permanently injured, was just sufficient to enable them to linger for a few years till prematurely cut off by death, after they had left the Board and engaged in other pursuits. To obtain the total mortality which has resulted, directly and indirectly, from missionary life, would require more elaborate data.

RECAPITULATION.

MORTALITY STATISTICS—MISSIONARIES A. B. C. F. M.

	Males.					Females.				
	Number of lives.	Years of exposure.	Expected mortality.	Actual mortality.	Ratio of actual to expected mortality.	Number of lives.	Years of exposure.	Expected mortality.	Actual mortality.	Ratio of actual to expected mortality.
Western Africa, River Gaboon, and Cape Palmas	19	151.2	1.5747	8	5.0803	20	136.6	1.1897	8	6.7244
South Africa	21	263.3	4.4272	5	1.1294	21	357.	3.6267	3	.8272
Turkey and Greece	104	1151.2	15.6412	24	1.5344	126	1301.7	11.2359	28	2.4920
Syria	27	368.10	3.7527	7	1.8753	40	351.4	3.2994	9	2.7278
Persia	23	255.3	2.6772	11	4.1088	24	247.1	2.2268	5	2.2454
India, Ceylon, Madura, Madras, Siam, and Indian Archipelago	127	1636.11	19.6963	42	2.1324	147	1478.2	16.7741	55	3.2789
South China	22	308.4	3.5027	8	2.2840	17	191.8	1.6992	8	4.7248
North China	14	161.9	1.6346	3	1.8.53	13	141.9	1.6156	1	.6190
Sandwich Islands and Micronesia	78	1537.3	22.9690	18	.7857	76	1491.10	21.5992	17	.7871
Cherokee and Choctaw Indians	61	823.4	9.6951	14	1.4479	39	663.1	8.2018	12	1.4631
Total	496	6957.3	85.5510	140	1.6365	523	6360.	71.4624	146	2.0488

In preparing the foregoing tables, it has occurred to the writer that it might be of great importance to the cause of Foreign Missions, as well as for the information of the public at large, that careful and accurate statistics of the health, exposure, and mortality of the foreign missionaries should be prepared. When we take into consideration the years of constant study and the initial expense of fitting one for this field of labor; the difficulty in finding the right class of men, who are willing to peril their lives and health in this cause, at a time when wealthy congregations are willing to pay liberally for their services at home; and

especially the fact that the majority of them return with impaired health after a few years' exposure—the value of a single life rises to an importance which it is impossible for us to estimate in money, and the subject of knowing their sanitary and mortality experience, and of discovering such methods as will enable them to prolong their lives and usefulness, becomes a matter which ought to concern all who take an interest in the cause.

These tables also suggest the question whether some investigation should not be made, or statistical information obtained, to lessen the great excess of mortality among the female lives. In nearly all the mission fields the female mortality is from thirty to fifty per cent. greater than among males, which is far greater than the corresponding mortality among the sexes in the United States. It seems as if it would be but an act of justice towards that sex which makes the greatest sacrifices, who lead silent and uncomplaining lives among so much that is repugnant and disgusting to their finer sensibilities, that the causes which have produced this excess of mortality should be thoroughly investigated, and, if possible, measures taken to avoid it in the future.

SEPARATE MEDICAL EXAMINERS' REPORT.

If separating the medical examiners' report from the applications, and having it sent directly to the home office, without its coming into the hands of the agent, or its contents being known to the applicant himself, would secure the very desirable objects claimed for it by those who urge a separation, then of course mere considerations of convenience, either to the agent or to those whose duty it is to pass on the application, should not be allowed to prevent such separation.

By the course suggested it is urged that medical examiners will be more free and unrestrained, and therefore more candid and independent in their statements to the home office, and especially that they will be relieved from the embarrassment, and oftentimes from the injurious consequences, of being known as the cause of depriving the chagrined and disappointed applicant, who may be his friend or patron, of the benefits of life insurance. But would such results necessarily follow? I am persuaded that they would not.

Let us suppose a case. An application is made in regular form,—all the questions addressed to the applicant are answered in the most favorable manner,—the agent witnesses the signature, attests the regularity of the whole procedure, and forwards the application. The applicant is then taken to the regular appointee of the company, who, after making his examination, likewise forwards his report directly to the home office. In due time the agent is informed by the proper officer of the company that the application has been declined without assigning any reason therefor. Now under such circumstances, will either agent or applicant have any difficulty whatever in accounting for the rejection? Of course it will be attributed to the unfavorable report of the medical examiner—more especially as his was a "secret" report. Even in cases where he recommends the risk, if from any cause whatever the application is rejected, the secret medical report will be sure to be blamed for it. So far, therefore, from protecting medical examiners by the course indicated, their difficulties will be the rather increased.

As to the hope of securing a more candid and truthful report, that also, it is believed, will prove delusive. If the physician has not honesty and manliness enough; if professional honor and obligation are not motives sufficiently strong to induce him to faithfully perform his duty to the company which employs him, and which looks to him for an impartial report, it is useless to expect to obtain this in any other way.

The medical officer whose duty it is to pass on risks is, after all, governed far more in his decision by the facts stated in the application, and in the certificate of examination, than by the opinion of the risk expressed by the examiner; and if medical examiners were at all times careful and candid in stating all the necessary facts, their recommendation in the case would be of comparatively little importance.

There would seem, therefore, to be no sufficient reason for a separate medical report, especially where there are obvious advantages in keeping together all the papers relating to the same case.

It is true, however, that cases do occasionally arise in which the peculiar relations of the examiner to the party examined may be such as to render an unfavorable report in his case exceedingly embarrassing; but such contingencies are amply provided for in the directions laid down in our books of instruction for the guidance of medical examiners, where it is said: "If at any time it should become desirable to communicate to the company privately any fact or opinion, which it might not be proper to state in the certificate of examination, or if the relation of the examiner to the applicant should be such as to render an unfavorable report in any case prejudicial to his business, a private note addressed to the company, who will assume the responsibility of declining the risk, would effectually obviate all such difficulties; and it is to be hoped that medical examiners will not hesitate to pursue this course."

A Medical Director.

St. Louis, Nov. 26, 1873.

ON THE IMPORTANCE OF AN EXAMINATION OF THE URINE OF APPLICANTS FOR LIFE ASSURANCE.

BY A CANADIAN EXAMINER.

It has occurred to the writer that the importance of an examination of the urine of applicants for life assurance has to a certain extent been overlooked by assurance companies, and perhaps by some of their medical officers. No examiner would recommend a risk, no matter how robust the appearance of the individual or free from flaw his family history, without placing his ear over the heart and directing his attention more or less to the state of the lungs; but the kidneys, although equally subject to disease with the former, speaking generally, and of equal importance in the economy, are allowed to escape scrutiny, unless, indeed, the attention be arrested by some prominent symptom.

The prevalence of chronic structural renal diseases, and the tendency of many of them to terminate fatally; the obscurity of the early symptoms, and the comparative ease with which they may be concealed, indicate the necessity of an examination in the great majority of cases. It is not uncommon to meet with persons who have always enjoyed good health, but who latterly have suffered in a slight degree from flatulence and indigestion, which they ascribe to change of habits, or error in diet, or to temporary anxiety, which has also to account for the frequent headaches and neuralgic pains, and perhaps paleness of countenance. These

derangements may be so slight that the sufferer attaches little importance to them,—so little that he does not consider it necessary to consult his ordinary medical attendant, but either takes some simple domestic remedy, or trusts entirely to nature to right herself. It is almost needless to say, in this place, that the ailments mentioned above are frequently the only indications of the commencement of serious mischief in the kidney. In some important morbid states of that organ, there is little or no local pain to direct attention to the seat of disease. At length a puffiness about the eyelids or swelling of the feet startles the patient and his friends, and the cause of his previous indisposition is soon but too apparent. But there are other cases in which the symptoms are still more obscure and so trifling that the patient has ignored them altogether, and an attack of convulsions or the approach of coma, or the sudden appearance and rapid advance of dropsy, reveals the presence of a disease which in most instances tends to a fatal issue.

If the foregoing remarks be correct in a general way; if renal diseases be comparatively common, and sometimes without marked symptoms in the early stages, and if many of them tend to terminate fatally, then the necessity for testing the urine of persons applying for life assurance is as great as that of an examination of the heart by means of the stethoscope. It has been assumed that the managers of life companies are of a different opinion. In proof of this, it may be mentioned that some companies have an established rule that when the applicant desires a policy for over a certain fixed sum the urine shall be examined, implying, to some extent, that in ordinary cases this examination is superfluous. Most companies, however, have no rule in this respect, leaving the matter entirely in the hands of their examiners; and if their examiners were to insist on testing the urine of even a considerable proportion of the persons presented for examination, the probability is—as life assurance business is now conducted—that many of them would soon find their occupation, as such, gone.

Dr. Purdon, of Belfast, whose paper upon Medical Examination for Life Assurance appeared in the last number of the RECORD, since the above was written, is of opinion that "in all cases the specific gravity of the urine ought to be taken, and the urine tested, at least, for albumen."

Correspondence.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—I have been a careful reader, from the first, of your Medical Department of Life Insurance, and I am much gratified in noticing the interest which is taken in the questions to whose discussion you have loaned your columns. But I am afraid this discussion has not always taken a very practical direction, and, at the risk of being tiresome in following a path already pretty well worn, I offer you a few suggestions as the result of some personal acquaintance with the subject-matter. I feel the more at liberty to do this since it seems quite clear to me that the topic will bear further investigation, and because I conceive that no one has as yet hit the nail just on the head. The question is, in fact, much broader than it is the custom to regard it, reaching as it does through every branch of the business of Life Insurance, and it appears quite as improbable that any very marked improvement is to result from an overhauling of medical examiners without, at the same time, correcting abuses which exist at the fountain-head whence all medical examiners may be said to flow, as it might be to attempt to straighten the course of the Mississippi by dredging some of the smaller streams which contribute to form the Missouri.

The medical examiner is only one of the factors—and one of the simplest ones—composing a very complex problem with many other factors, all more or less antagonistic, from whose combination the medical examiner's work, in greater or less perfection, is the resultant; and it is a curious thing that while life underwriters have universally acknowledged that a selection of lives is imperative, they have used the very means, in securing this selection, to render it as barren as possible of any good results. I have only to point you, sir, to the fact that, with few exceptions, medical examiners are selected, directly or indirectly, by the agents for whom their services are desired; and to what I believe is the greatest of all the evils enshrouding this whole business—that the agents' remuneration is made commensurate with the number of applicants accepted by his medical examiner. A premium is thus distinctly offered for dishonesty. What wonder, then, that it is gravely announced that the benefits of medical selection do not appreciably extend beyond two or three years, and, following the old doctrine of hebdomadal cycles, are entirely imperceptible after seven. The secretary of a life company, writing in one of the earlier numbers of the RECORD, has said that it is not so much incompetence of medical examiners which he fears, as the lack of a certain "moral qualification" to do justice to the companies. I suppose this is only an elegant way of saying that it is not incompetency but dishonesty which his company stands in dread of. If he will add, now, to his indictment: "and a great lack of care,"—a moral delinquency of another sort—I am ready to believe that he has come nearer to stating the whole case in a nutshell than any writer I have known.

But there is a point bearing upon this subject of life examinations which I have not seen touched upon at all, and it is one, I think, of very obvious import: Not every very good general practitioner may be qualified to make a thoroughly competent examination; for the problem of longevity is not to be decided upon exclusively by the methods of physical diagnosis, nor from any catalogue of general inquiries. Many suggestions as to the probable longevity of an assurant will present themselves to the mind of an examiner who has made the subject a careful study, which might not be thought of by another. With the one, the decision will be based upon broad principles, with due regard to all the concomitant events entering into the judgment; for the other, the whole investigation may be one of mere routine answering of certain printed questions. So that I imagine, Mr. Editor, that when, by and by, the millennium of life insurance is come, your medical examiner will be a specialist—at least in those districts sufficiently large to afford him an adequate support.

As a further objection to the employment of general practitioners—in large cities, let us say—it might be urged that the demands of practice leave insufficient time for the full discharge of the duties of the medical examiner. Every physician who has had much experience in life-insurance matters—and a good many who are not physicians, as I know—can hardly have failed to notice the insufficiency of the vast majority of medical examinations.

An applicant is brought to your office, having suffered perhaps for a fortnight the importunities of an

agent, who has at last brought him "up to the scratch" by wild promises of "dividends," and all the other "inestimable advantages" forming his stock in trade, and very possibly after having partaken on the way of certain diluted drinks, "to get his courage up;" he knows a medical examination is a formidable thing—to speak of—and so he is ushered into your presence

> "Like one who, on a lonesome road,
> Doth walk in fear and dread,"

You stand him up against the wall, take his height, measure his chest, percuss, auscultate, palpate, possibly look if he has a hernia, or poke your fingers under his ribs to see if he have an enlarged spleen or liver—and *presto!* the thing is done. It has occupied you, perhaps, twenty minutes. If you suggest to the agent that such an examination as this is not likely to elicit the fullest truth as to an applicant's condition, he will easily find other more complaisant medical examiners who will trouble him less than you. To such an extent reaches this desire to save time, and annoyance, and inconvenience to agents, that I have known certain medical men grown so astute through long experience that they can tell if an applicant is a good risk by simply looking him in the face and feeling his pulse, as men, they say, who have been kicked sufficiently immediately know if a boot is of calf-skin or of kip.

One other thing is worth a brief mention here: the manifest unfairness of the present system of classifying risks, which assumes the quite ridiculous proposition that one insurable life at a given age is equally good with any other insurable life of the same age. It can hardly be doubted, I think, that any just classification of lives should recognize differences similar to those made by the fire underwriters in their classifications. A fire-proof structure is insured at a certain rate, a wooden one at a certain other, and no one questions the custom which awards to the latter a higher rate than to the former. See now this curious contrast: Smith, who is a hearty, vigorous man, of good habits and healthful occupation, in whose family there is no suspicion of hereditary taint, and who is in every possible aspect an unexceptionable risk, is insured at the same rate as Brown, who is of less vigorous constitution and family, whose occupation is not so conducive to healthfulness, and who, in a word, may be of doubtful insurability at all. And this is what we facetiously call securing the benefits of medical selection!

I ask your indulgence, sir, for having taken up so much of your valuable space, but I feel more than a passing interest in your efforts to raise the standard of medical examinations, and I wish you in the heartiest manner good-speed. The task is one of no small difficulty, but with a proper co-operation on the part of the companies, its accomplishment may not be very remote. I am sorry, for the success of the undertaking, that one may not say of all medical examiners, as old Sangrado did of his pupil: *Tu étais savant, Gil Blas, avant que d'être médecin.*

San Francisco, November 10, 1873.

Miscellaneous.

A Centenarian.—There is now living at the Lye, Worcestershire, an old woman, who, on well-established evidence, has reached the age of 103. Her name is Sarah Hill, and she lives with a married daughter. For a number of years past she has been receiving 2s. a week from the parish, and she has all along asserted her age to be in accordance with the years given above, but her statement was doubted. She said she was baptized at Old Swinford Church in 1772, and that she well remembered walking there on the occasion, being at the time a little trot of between two and three years. Her friends, piqued apparently at the doubt entertained on the subject, have lately obtained a certificated extract from the parish register at Old Swinford, showing that she was baptized on December 15, 1772. Up to last year she was tolerably active, but she has now taken to her bed. At the last meeting of the Stourbridge Board of Guardians, it was resolved, on the recommendation of the relieving officer, to allow her an extra 6d. per week.—*Insurance Gazette, London.*

Mortality from Yellow Fever.—Several of our eastern life-insurance companies have suffered unexpected losses among their policy-holders by the recent epidemic of yellow fever at Shreveport and Memphis. We have searched in vain for any facts bearing upon the question of the influence of epidemics upon the mortality of insured lives, and would be glad to receive any communications that might enlighten our readers upon this topic.

By referring to the records of one company, we find that in 1852 the mortality was unexpectedly large, owing to the prevalence, in San Francisco more particularly, of a severe type of dysentery or diarrhœa. Out of 38 deaths, as many as 14 were due to these causes.

The institution of life insurance has not been long enough in existence to enable us to safely predict whether or not it could stand the strain of a severe epidemic such as even this city, for instance, has once or twice witnessed during the present century. With good sanitary laws, however, it is not likely that any of our Northern cities will again be visited with scourges of similar fatality.

Physical Aspects of Primogeniture.—Dr. Hough's promised article on "Physical Aspects of Primogeniture," is again postponed till the January 15th number of the Record.

Have you ever been Intoxicated? If so, when Last?—This question, in the new blanks spoken of in the last insurance number of the Record, meets, at the very outset, with strong opposition,—not from the agents, but from the persons to whom the question has to be put. They prefer not to have their social transgressions thus explicitly recorded.

The Variables Affecting Life.—Dr. T. S. Lambert brings the variables affecting life under eight heads:—

"First variable: *The Nature of Life.*—There is associated with life a lifetime, to wit: to all living things there is a natural lifetime which cannot be exceeded. Not only this, but the different parts or organs of a living thing may and usually do have different lifetimes. . . . . A man may be long-lived in regard to all his organs but one, and therefore appear generally well, hearty, and long-lived; but the discerning eye will read the truth. Second variable: *Ancestry.* Third variable: *Constitution.* Fourth variable: *Habits.*—The person's answers should be particular and definite, and when made again through the examiner are confirmatory or detective. Fifth variable: *Vocation.* Sixth variable: *Residence.* Seventh variable: *Intelligence* in regard to taking care of health. Eighth variable: *Instincts.*"

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